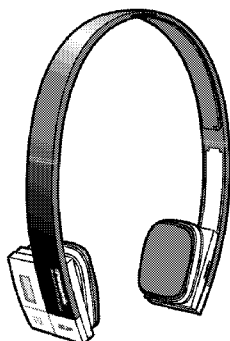


Service Manual

SD Audio Player



SV-SD05

Colour

(S).....Silver Type

Area

(E).....Europe.

Specifications

Sampling rate:	32 kHz, 44.1 kHz, and 48 kHz
Compression/decompression:	AAC and MP3
No. of channels:	Stereo, 2 channels
Frequency response:	20 Hz to 20,000 Hz (+0 dB, -6 dB)
Output level:	5 mW + 5 mW (16 Ω)
Power supply:	DC 1.5 V (one LR03, AAA, AM-4 battery)
Approximate play time:	6 hours (Panasonic alkaline battery)
Maximum dimensions (WxHxD):	
unfolded:	150 x 169 x 40 mm
folded:	79 x 109 x 52 mm
Cabinet dimensions (WxHxD):	
unfolded:	150 x 169 x 38 mm
folded:	77 x 109 x 52 mm
Mass:	104 g with battery 92 g without battery

- Specifications are subject to change without notice.
- The play times shown depend on operating conditions.
(Low temperatures can reduce the operational life of the alkaline battery.)
- Mass and dimensions are approximate.

WARNING

This service information is designed for experienced repair technicians only and is not designed for use by the general public. It does not contain warnings or cautions to advise non-technical individuals of potential dangers in attempting to service a product. Products powered by electricity should be serviced or repaired only by experienced professional technicians. Any attempt to service or repair the product or products dealt with in this service information by anyone else could result in serious injury or death.

Panasonic®

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1 Accessories

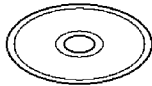
- Lanyard hook
(RFE0072).....1 pc.



- Hard case
Case(RPQ1073).....1 pc.
Cushion(RPN1319).....1 pc.



- CD-ROM.....1 pc



- SD memory card.....1 pc.



- USB Reader/Writer.....1 pc.



3 An Outline of Panasonic Media Manager V2

For reference page in operating instructions is refer to tail end of both sides.

System requirements

Operating System: Microsoft® Windows 98 or Windows Me

RealJukebox for Panasonic cannot be used on Microsoft Windows 3.1, Microsoft Windows NT, Microsoft Windows 2000 or Macintosh operating systems. Correct operation cannot be guaranteed when used on Microsoft Windows 95 or Microsoft Windows 98 that has been upgraded from Windows 95/3.1.

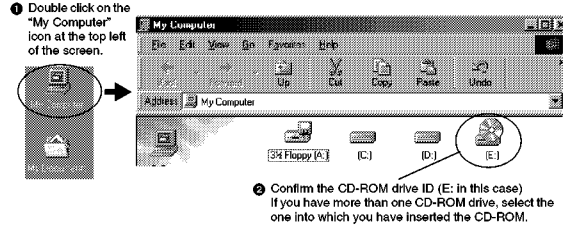
Minimum System:	Recommended System:
Intel Pentium®233 MHz MMX, or equivalent CPU	Intel Pentium®II 333 MHz MMX, or equivalent CPU
64 MB RAM	64 MB RAM
Hard drive space: 30 MB for Software 200 MB for Music	Hard drive space: 30 MB for Software 1 GB for Music
CD-ROM drive 16 bit Sound card and speakers	CD-ROM drive that supports digital audio extraction Full Duplex Sound card and speakers
16-bit color video card	16-bit color video card
Internet connection and web browser (Microsoft®Internet Explorer®4.72 or later)	Internet connection and web browser (Microsoft®Internet Explorer®4.72 or later)

Installation

The driver for the USB Reader/Writer and RealJukebox for Panasonic are included on the supplied CD-ROM. Follow these steps to install them.

Checking drive ID

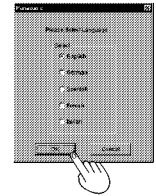
You may have to specify the drive ID during installation. Turn on the computer and start Windows. Refer to the following to check the ID of the drive.



Installation

Do not connect the USB Reader/Writer until installation is complete.

- 1 Turn on the computer and start Windows.
- 2 Insert the included CD-ROM into the CD-ROM drive.
 - The installer program starts automatically.
 - If the installer program doesn't start, run the program by specifying the file name (see page 8).
- 3 Choose the language you would prefer to use when using this software and click on [OK].

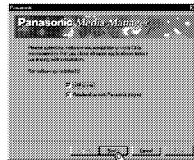


4

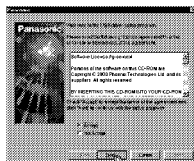
5

Installation

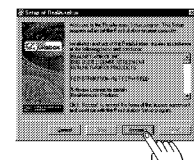
- 4 Click on [Next].
Select all two applications under normal circumstances. Make changes if your computer-operating environment requires then click on [Next].



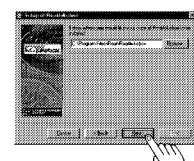
- 5 Read the user agreement, check "Accept" and click on [Next].
The USB Reader/Writer driver is installed.



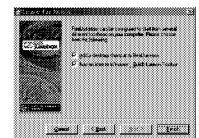
- 6 Read the user agreement and click on [Accept].



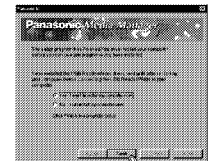
- 7 Click on [Next].
Make changes to the destination if necessary before clicking on [Next].



- 8 Select whether to create icons on the desktop and toolbar, and click on [Finish].
Recommendation: create both icons. The setup program starts.



- 9 Check "Yes" and click on [Finish].
The computer restarts and installation is complete.



Note
If you decided not to install the USB Reader/Writer driver in step 4, the computer will not restart automatically.

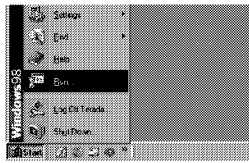
6

7

Installation

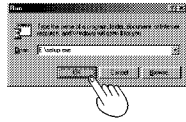
If the installation program doesn't start automatically

- 1 Click on [Start] and, click on "Run..."



- 2 Type in "#:setup.exe" and click on [OK].

- The installation program starts. Continue from step 3 on page 5.
- #: Enter the CD-ROM ID here. (page 5, Checking drive ID)
- Letters you enter here can be either upper or lower case.



Using the online help

SD Audio HELP

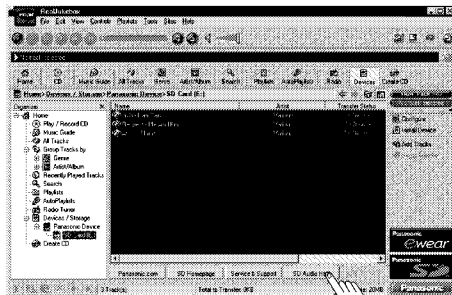
The SD Audio Help includes explanations about the sections of RealJukebox for Panasonic specific to Panasonic that have not been explained in these operating instructions or in the Online Help for RealJukebox.

- AAC settings and explanations
 - Data conversion
 - Transferring tracks to and deleting tracks from SD Memory Cards
- And more

To show the online help for SD Audio

After starting RealJukebox for Panasonic. (page 12)

- 1 Connect the USB Reader/Writer (page 11).
- 2 Insert an SD Memory Card into the USB Reader/Writer.
- 3 Click on [Devices].
- 4 Double click on "Panasonic Device" and then double click on "SD Card".
- 5 Click on the [SD Audio Help] button.



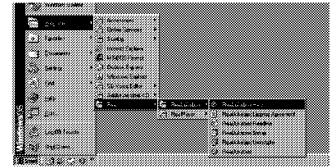
Using the online help

Online help for RealJukebox

These instructions describe basic operations such as installation and transferring tracks. For more detailed instructions, refer to the online help included on the CD-ROM.

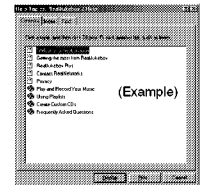
To show the online help

- Do one of the following.
- Click on [Start] and select "Programs" → "Real" → "RealJukebox" → "RealJukebox Help".
 - After starting RealJukebox for Panasonic, select [Contents] from the "Help" menu.



To search using the table of contents

- Double click on [] to display its contents.
- Double click on [?] to see an explanation.



Searching by keyword

The table of contents is replaced by a list of keywords when you click on the "Index" tab. You can find a keyword by either entering it or scrolling through the list. Double click on the keyword to see an explanation.

Connecting an SD Memory Card

Connect the included USB Reader/Writer to transfer (record) tracks to your SD Memory Card.

Note

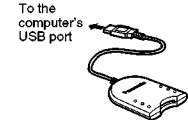
- Connect to an AC power supply when using a portable computer. Data can be lost or errors can occur if the computer turns off during operation.
- Operation cannot be guaranteed under the following circumstances:
 - When you have connected two or more USB Reader/Writer to your computer or are using another USB device.
 - When you have connected another SD Memory Card adapter.
 - When you are using a USB hub or extension cord.

- 1 Turn on the computer and start Windows.

- 2 Connect the USB Reader/Writer to the computer's USB port.

The "New Hardware Found" screen appears. The driver for the USB Reader/Writer is enabled automatically.

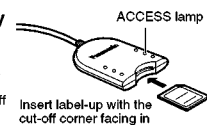
Check that it appears in Windows Explorer as a removable drive.



- 3 Taking care that the card is facing the right way, insert the SD Memory Card into the USB Reader/Writer.

Note

You can damage the card and USB Reader/Writer's slot if you insert the card incorrectly. Ensure the USB Reader/Writer's ACCESS lamp is off before inserting or ejecting SD Memory Cards.



Do not remove the SD Memory Card while transferring tracks even if the ACCESS lamp is off.

The USB Reader/Writer

- Do not wet, drop, or expose the USB Reader/Writer to impacts.
- Do not use or store in locations directly exposed to sunlight, a heat vent, or a heating appliance.
- Do not disassemble or modify.
- Do not insert foreign objects into the slot.

Protecting the data on your SD Memory Card

Performing the following actions before RealJukebox for Panasonic has started completely, while the USB Reader/Writer's ACCESS lamp is on, and while transferring tracks can damage your SD Memory Card and corrupt the data it contains.

- Inserting or ejecting the SD Memory Card
- Connecting or disconnecting the USB Reader/Writer
- Shutting down RealJukebox for Panasonic or Windows forcefully
- Turning the computer off forcefully (for example, unplugging the AC power supply cord)

Startup

Startup

1 Double-click on the desktop icon.

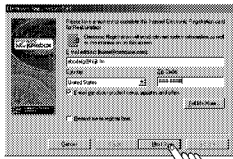
RealJukebox for Panasonic starts and the registration wizard begins.

Note

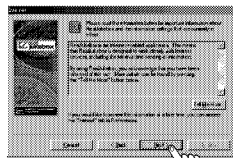
If the icon is not on the desktop, from the [Start] menu, select "Programs" → "Real" → "RealJukebox" → "RealJukebox".



2 Fill out the form and Click on [Next].

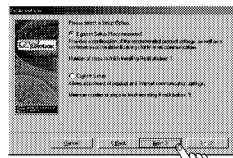


3 Click on [Next].



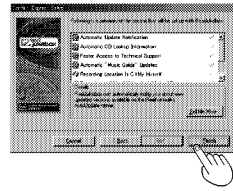
4 Click on [Next].

Select "Express Setup (Recommended)" under normal circumstances. Select "Custom Setup" if necessary before clicking on [Next].



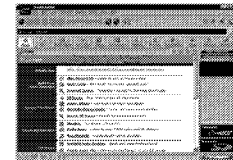
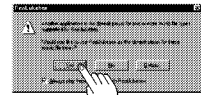
5 Click on [Finish].

You are connected to <http://www.Real.com/central/> and your registration information is sent. A screen appears asking if you want to use RealJukebox as the default player.



6 Click on [Yes].

Setup of RealJukebox for Panasonic finishes and the operation window appears.



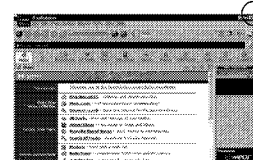
After doing this once, the RealJukebox for Panasonic operation window will be displayed by simply clicking on the desktop icon.

Note

Turn off the power-saving functions on your computer while using RealJukebox for Panasonic.

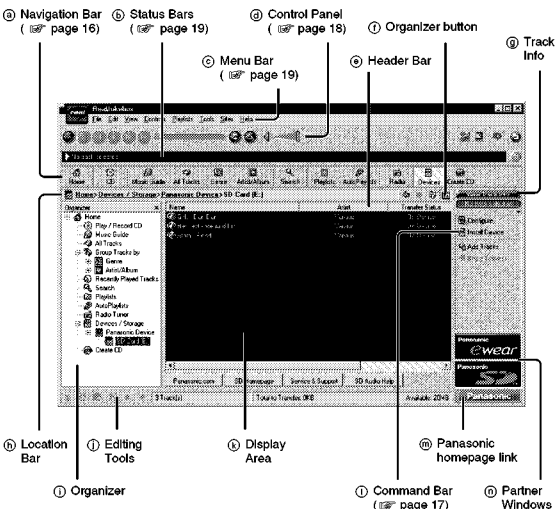
Exiting

Click on the [x] box at the top of the main window.



Main features of the display

Use the Navigation Bar to display track lists and other RealJukebox for Panasonic feature areas, and the Control Panel to play and record tracks. The Command Bar contains commands you can use on tracks or track lists, Playlists, devices, and more. RealJukebox for Panasonic menus contain many additional options, including Preferences, Navigation options, and Help.



If play starts automatically when you insert a CD into the CD-ROM drive, you will need to shutdown any CD playing applications before you can use RealJukebox for Panasonic.

Quick Start

This section will help you get started using some of RealJukebox for Panasonic's basic features. As you become more experienced using RealJukebox for Panasonic, be sure to explore both the program and this Help system to learn about the many additional tools and options available to you.

Note

The following instructions assume that all default automatic playback options are *on*.

Feature	Description
Record/Play CDs	To Record and Play a CD, insert it into your CD ROM drive. To toggle recording on/off, click the Record button on the Control Panel. To toggle playback on/off, click the Play button.
Play Tracks	To view and play your recorded music, click a Group button (Genre, Artist, Album), then double-click items in the display window to open or play them, or select a track and click the Play button in the control panel.
Create Playlists	To create a custom Playlist, click New Playlist in the Command Bar and follow the on-screen instructions.
Download Music	To download music from the Internet, click the Music Guide button in the Navigation Bar and follow the links.

RealJukebox Homepage

RealJukebox Homepage gives you an easy way to get started using RealJukebox. Each item in the window provides a brief description of a RealJukebox feature, and you can click a link to display track lists, create Playlists, download music, and more.

Note

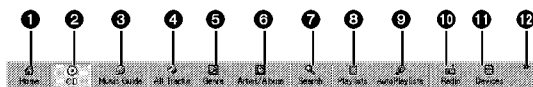
To see an overview of all options, click the organizer button to see RealJukebox for Panasonic in organizer view. To go back to the previous location, use the Back or Forward buttons or the Location Bar.

Main features of the display

RealJukebox for Panasonic Controls and Navigation

The Navigation Bar

The Navigation Bar gives you instant access to every RealJukebox for Panasonic feature area. Just click a button to display the track list or feature you want to use, then use the Control Panel and Command Bar to play tracks, create Playlists, and more.



Note

You can customize the Navigation Bar: right-click the Navigation Bar and choose the buttons you wish to display by checking/unchecking the boxes.

	Feature	Description
1	Home	Go to the RealJukebox homepage.
2	CD	Record or play a CD.
3	Music Guide	Go to Music Guide and download music from the Internet.
4	All Tracks	View all tracks in your music library.
5	Genre	Click a Group button to go to the desired Track Group.
6	Artist/Album	View the Artist and Album Track Groups.
7	Search	Search your music library using keywords. If you don't see this button in the Navigation Bar, click the >> on the right end.
8	Playlists	View your Playlists. If you don't see this button in the Navigation Bar, click the >> on the right end.
9	AutoPlaylists	View your AutoPlaylists. If you don't see this button in the Navigation Bar, click the >> on the right end.
10	Radio	Go to Real.com and play live streamed radio broadcasts using the RealPlayer.
11	Devices	View your installed portable devices. If you don't see this button in the Navigation Bar, click the >> on the right end.
12	>>	Shows hidden buttons.

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The Command Bar

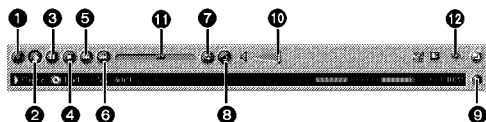
The Command Bar displays context-sensitive options based on the current track list or feature area. Many of these options are only available under the certain circumstances, such as when an appropriate item is selected.

Feature	Description
New Playlist	Launch a new window to help you create a new Playlist.
New AutoPlaylist	Launch a new window to help you create and design a new AutoPlaylist.
Edit AutoPlaylist	Lets you change the criteria for the selected AutoPlaylist.
Copy to Playlist	Send selected tracks to an existing Playlist.
Copy to Device	Send selected tracks to a portable device queue.
Add Tracks	Add selected tracks to a Playlist, AutoPlaylist, or portable device.
Check All	Select all tracks for recording from CD or transfer to a portable device.
Check None	Skip all tracks when recording from CD or transferring to a portable device.
Remix Now	Remix a selected AutoPlaylist: Automatically generates a new compilation of tracks using the same criteria.
Update Now	Updates the Music Guide display.
Begin Transfer	Transfer queued tracks to a portable device. (Changes to "Cancel Transfer" when tracks are being transferred)
Configure	Configure a portable device in preparation for transferring tracks. (Available only when a portable device is selected)
View Track Info	View Track Info associated with the selected track.
Edit View Track Info	Change artist name, album title, and genre for multiple tracks. Add lyrics, album art, and more.
Clear History	Erase the list of recently played tracks. Available only in the Recent window.
New Stations	Appears only when new radio stations are available. Click the New Stations button to display the Radio window.
New Music Guide	Appears only when Music Guide has been updated. Click New Music Guide to display the latest version of the Music Guide.

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The Control Panel

The Control Panel provides recording and playback control as well as skip, seek (search), shuffle (random), continuous play (repeat) options. The Control Panel also offers Visualization settings, quick access to your RealPlayer, and Skin mode.



	Feature	Description
1	Record	Click to begin recording the CD in your CD drive. Click again to stop recording.
2	Play	Click to play the selected track. Click again to stop playing.
3	Pause	Click to pause playback. Click again to resume playback.
4	Stop	Click to stop both playback and recording.
5	Previous	Click to jump to previous track on the current CD or track list.
6	Next	Click to jump to next track on the current CD or track list.
7	Continuous	Play current CD or track list repeatedly.
8	Shuffle	Play current CD or track list randomly.
9	Return	Click the return button to return to the currently playing track list. For example, if you're playing a track from a Playlist, and you're browsing your Groups (Genre, Artist, Album), clicking the return button takes you back to the Playlist your track is playing from.
10	Volume Control	Click and drag the slider to pump up the volume (right) or tone it down (left). Use the arrow keys to "fine tune" your settings.
11	Progress Bar	The Progress Bar displays the current track's playback progress. You can skip forward and backward in the currently playing track by dragging the slider left (back) or right (forward).
12	Launch RealPlayer	Launches the RealPlayer.

18

The Status Bars

• Play Status Bar

This bar provides up-to-date information on the currently playing track, including the name of the track and artist and the time elapsed/length of the track. Other information includes icons that tell you whether the track is playing from a CD (CD) or a recorded music file (an icon will tell you the format), and whether the track is playing in stereo (((...)))

• Record Status Bar

This bar provides up-to-date information on the currently recording track, including the name of the track and artist, the track number, and the recording progress. The Record Status bar only appears while a track is recording.

The Menu Bar

The menu bar offers dozens of options including navigation, preferences, playlists, plus online sites and Help. Click to open a menu, then click again to select an option.



The Header Bar

The Header Bar is the bar just above any track list. With a Group, Playlist, or All Tracks open, it contains the headers Track Name, Album, Artist, etc. You can specify which headers and columns appear in **Tools > Preferences > Display**.



To sort tracks by header criteria, click a header. For instance, to sort by name, click the "Name" header (Track Name, Playlist Name, Grouping Name).

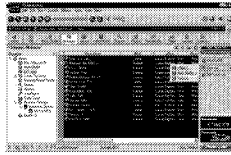
Note

Tracks on CD cannot be sorted, and Playlist tracks cannot be sorted using the Header Bar.

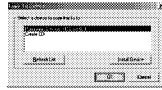
19

Select tracks you have recorded on your computer and transfer them to an SD Memory Card. The tracks are converted as they are transferred, so ensure you have made the correct conversion settings.

- 1 Connect the SD Memory Card.
- 2 Select tracks.
- 3 Click on "Copy to" → "Device".



- 4 Click on "OK".



- 5 Click on "Begin Transfer". "On Device" is shown when transfer is finished.



Note

Do not insert or remove SD Memory Cards while the "Transfer to SD card" window is being displayed.

Troubleshooting

Before requesting service, make the below checks and refer to the online Help. If you are in doubt about some of the check points, or if the remedies indicated in the chart do not solve the problem, refer to the directory of Authorized Service Centers (enclosed with this unit) to locate a convenient service center, consult your dealer for instructions or click on the [Service & Support] button.

Installation and startup

Problems	Check points or causes
Cannot install	<ul style="list-style-type: none"> • Insert the CD-ROM. • Ensure you have specified the correct CD-ROM drive.
Cannot start.	<ul style="list-style-type: none"> • Ensure the program is installed on the hard disc. The program cannot be run from the CD-ROM. • Ensure the computer has at least 64 MB of RAM.
I want to install just the USB Reader/Writer driver.	Install the driver from the included CD-ROM. In step 4 of the installation procedure, remove the checks from RealJukebox [with Panasonic plug-in].

Copyright protection limitations

- This software includes copyright limitations decided upon by the Secure Digital Music Initiative (SDMI).
 - You may be unable to use music data with this software if the data is copyright-protected or if you have recorded from a DVD-Audio player.
 - Where the owner of the copyright or music data providers have set conditions with regard to the use of the data, you are obliged to abide by those conditions.
- Your attention is drawn to the fact that recording pre-recorded SD Memory Card may infringe copyright laws.
- Upgrading RealJukebox for Panasonic
 - RealJukebox for Panasonic follows the guidelines set by the SDMI. Future changes to these guidelines may render some functions of RealJukebox for Panasonic inoperable. Upgraded versions of RealJukebox for Panasonic will be offered in such circumstances. A charge may be applied to these upgrades.

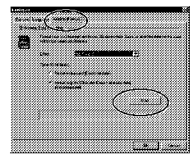
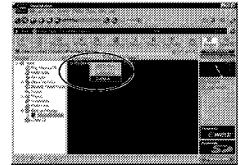
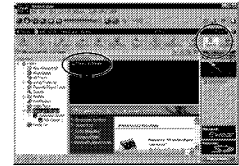
Formatting an SD Memory Card

Format your SD Memory Card to use SD Audio data. Some or all of the data on the card will be lost when you format it. Select "Format only for SD Audio (Erase all Audio data)" under normal circumstances. Select "Format entire card (Erase all data)" only when necessary.

Note

Tracks you have transferred using software other than RealJukebox for Panasonic are also deleted when you format the card. Check the data on the card before commencing formatting. Use only the method described below to format your card. Using other methods can render the card unable to transfer or play tracks.

- 1 Click on "Devices".
- 2 Double-click on "Panasonic Device".
- 3 Right Click on "SD Card".
- 4 Click on "Configure".
- 5 Click on "Initialize (Format)". Recommended: "Format only for SD Audio (Erase all Audio data)".
- 6 Click on [Start]. The SD Memory Card is formatted.



Limitations in Windows Explorer

- SD Memory Cards are shown as external drives (for example, "D") in Windows Explorer when they are connected to the computer. Do not use Explorer to move SD Memory Card music data or folders, change their names, or delete them. This can render the music data unplayable. Use only RealJukebox for Panasonic for editing.
- Similarly, do not use Explorer to move, change the names of, or delete music data and folders you have saved to your computer.

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- IBM and PC/AT are registered trademarks of International Business Machines Corporation of the U.S.
- Macintosh is a registered trademark of Apple Computer, Inc. of the U.S. in both the United States and other countries.
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- Other names of systems and products mentioned in these instructions are usually the registered trademarks or trademarks of the manufacturers who developed the system or product concerned. The ™ and ® marks are not used to identify registered trademarks and trademarks in these instructions.
- Licensed AAC Patents (U.S. patent numbers):

08/937,950	5,394,473	5,579,430	5,481,614	5,299,238	5,581,654
5848391	5,583,962	08/678,666	5,592,584	5,299,239	05-183,988
5,291,557	5,274,740	98/03037	5,781,888	5,299,240	5,548,574
5,451,954	5,633,981	97/02875	08/039,478	5,197,087	08/506,729
5,400,433	5,297,236	97/02874	08/211,547	5,490,170	08/576,495
5,222,189	4,914,701	98/03036	5,703,999	5,264,846	5,717,821
5,357,594	5,235,671	5,227,788	08/557,046	5,268,685	08/392,756
5,752,225	07/640,550	5,285,498	08/894,844	5,375,189	

4 Troubleshooting

• What to prepare

- A PC that has the exclusive application software (Panasonic Media Manager V2) installed. Be sure to check for normal operation of the PC. If other application software is installed in the PC, be sure that this software does not affect the operation of the Panasonic Media Manager V2.
- When a user's product is taken in for service, be sure to obtain not only the player but also the user's SD card and USB reader/writer. Also, try to obtain as much information as possible on the operational environment of the user's PC.

<PC's operational environment>

Product name, model number, name of CPU, operation clock, RAM capacity, HD capacity, names of installed software, use of USB hub, and any equipment connected with USB simultaneously.

• Checkpoints before servicing

- Is the write-protect switch on the SD card set to LOCK?
- Does the battery have enough capacity?

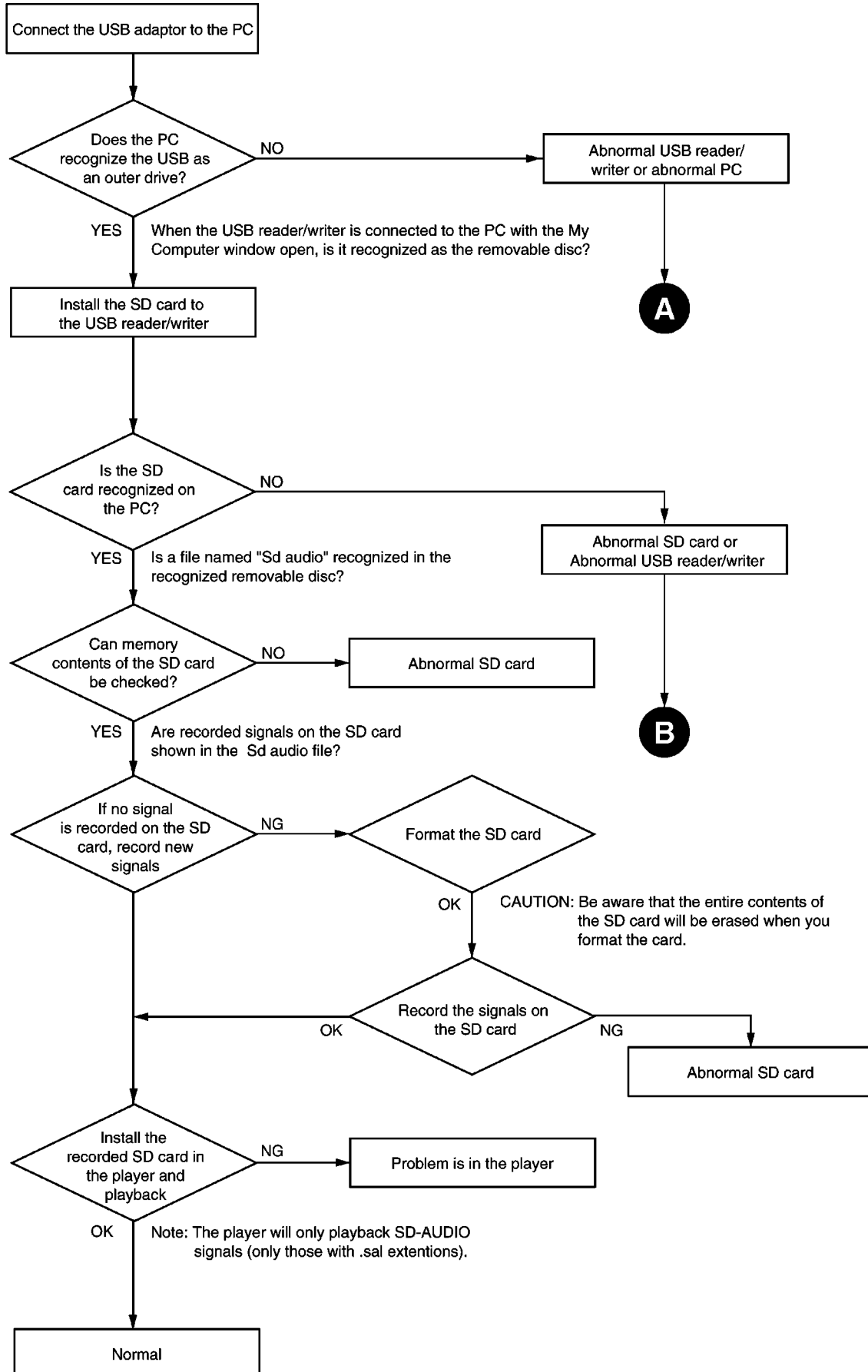
Be aware that manganese batteries do not have sufficient capacitor; their use can result in improper operation.

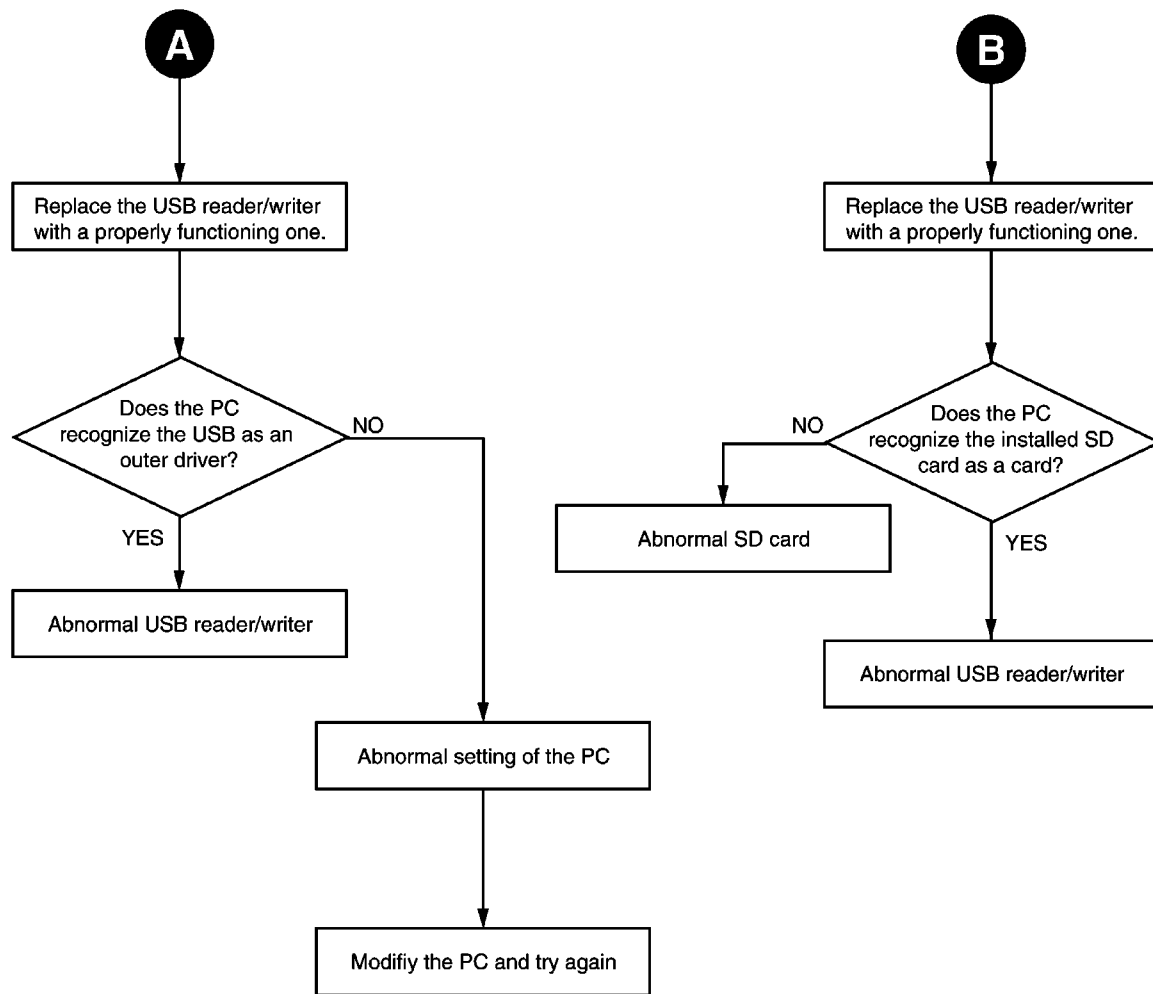
• Precautions

- A PC sometimes does not recognize the USB reader/writer depending on its conditions (such as competing with the installed software). Therefore, always keep the PC in good condition so that any adaptor can be connected properly.
- There is a possibility that not only the hardware but also software (PC's application software) may be the source of the problem. Therefore, be sure to inspect all potential sources carefully and thoroughly before specifying any causes.
- Check the connection part of the card to see whether it is dirty or has any foreign objects attached to it before specifying the cause of the problem.
- If the card is formatted, the written data (signals) will be erased and cannot be recovered.
- When you format the card, be sure to format it with the format function of Panasonic Media Manager V2.
If the card is formatted with Windows or MS-DOS, the card will not operate with Panasonic Media Manager V2.

4.1. Flowchart

This is to determine whether the cause of the problem is in the IC recorder or in one of the accessories.



**Remarks:**

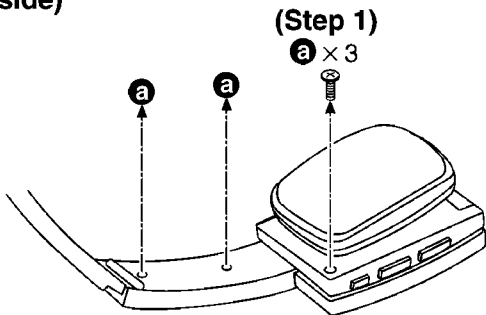
When the PC does not recognize the USB reader/writer as a removable disc even when the USB reader/writer is connected to the PC, this is an indication of an abnormal USB reader/writer. To confirm this, and to improve the accuracy of your service diagnosis, however, it is recommended that you repeat the check procedure with a new, properly functioning USB reader/writer. If the PC does not operate normally, it is not possible to check the problem accurately. Be sure to keep the PC working properly according to its operating requirements.

5 Operation Checks and Component Replacement Procedures

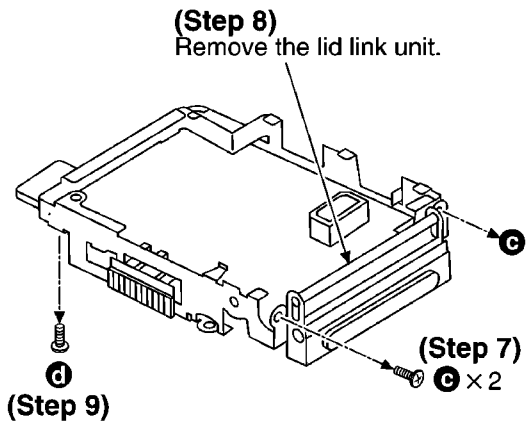
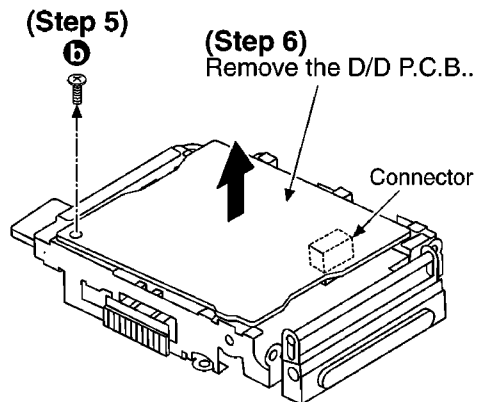
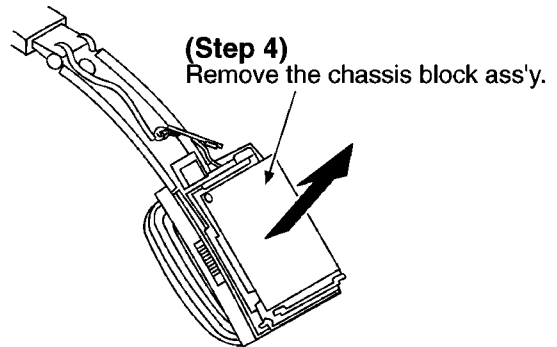
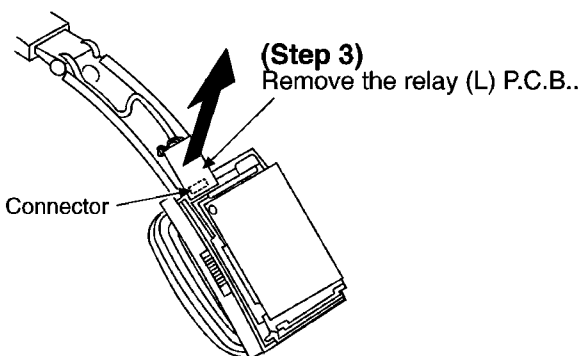
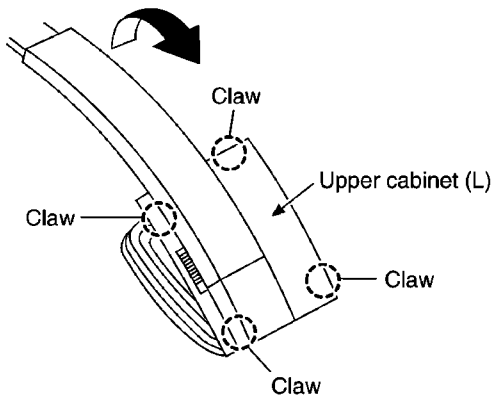
- This section describes procedures for checking the operation of the major printed circuit boards and replacing the main components.
- For reassembly after operation checks or replacement, reverse the respective procedures. Special reassembly procedures are described only when required.

5.1. Checking for the LCD P.C.B., D/D P.C.P. and main P.C.B.

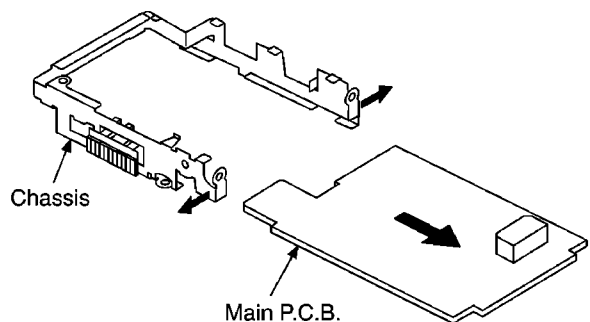
(L side)



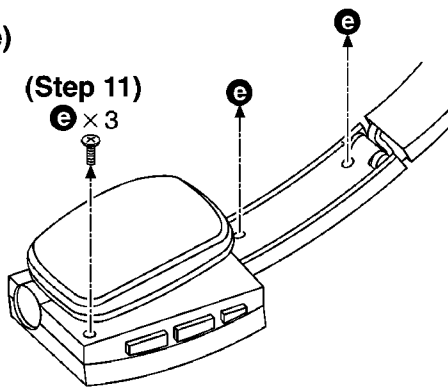
(Step 2)
Release the 4 claws, and then remove the upper cabinet (L).



(Step 10)
Remove the main P.C.B..

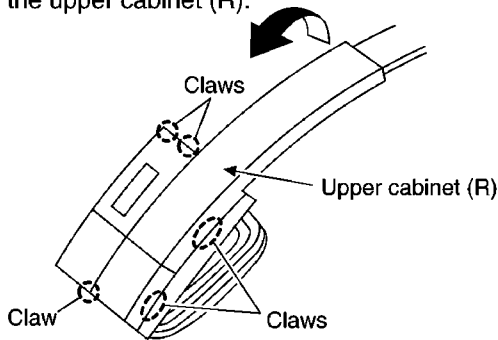


(R side)

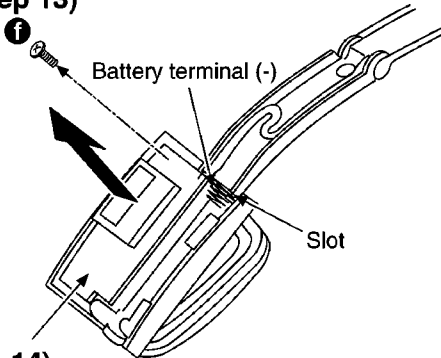


(Step 12)

Release the 5 claws, and then remove the upper cabinet (R).



(Step 13)



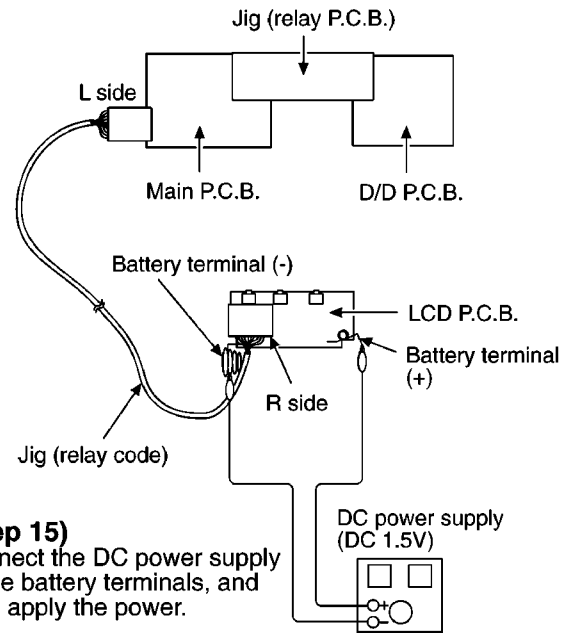
(Step 14)

Remove the LCD P.C.B..

NOTE:

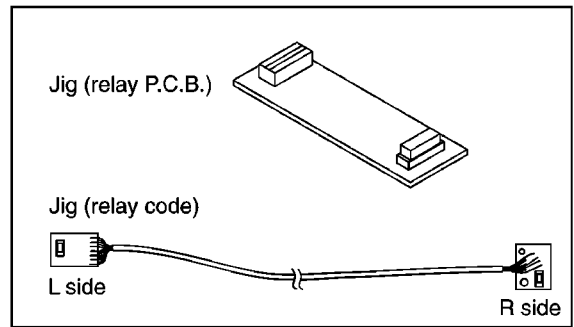
When installing the LCD P.C.B., be sure to align the battery terminal (-) with slot.

• Check the LCD P.C.B., D/D P.C.B. and main P.C.B. as shown below.



(Step 15)

Connect the DC power supply to the battery terminals, and then apply the power.



Concerning the jig (relay P.C.B. and relay code)

We do not supply these relay P.C.B. and relay code as a replacement part.

Please order to AV Network Group Sales Engineering Department.

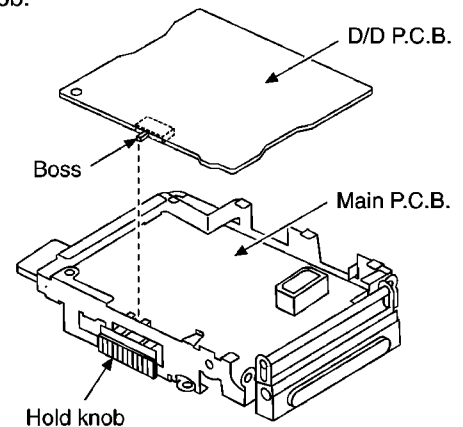
• Part No. :

Relay P.C.B.RFKZ0100

Relay codeRFKZ0103

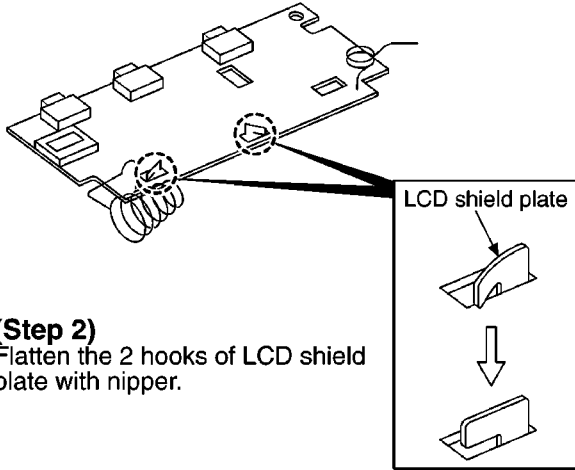
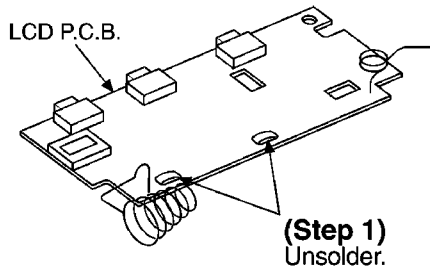
Notice for installation of D/D P.C.B.

• Make sure the boss of switch are fit in the hold knob.

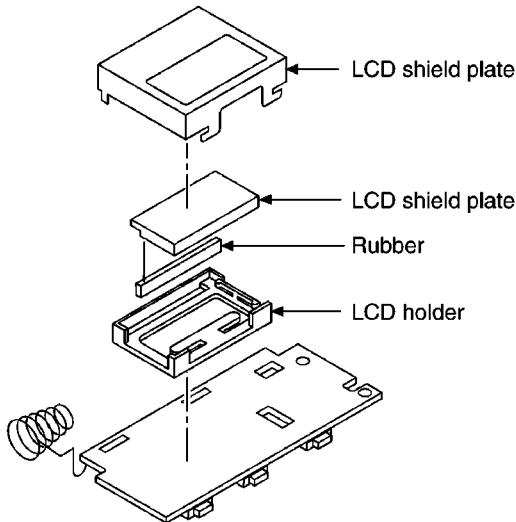


5.2. Replacement for the LCD

• Follow the (Step 11) - (Step 14) of item 5.1.



(Step 3)
Remove the LCD shield plate so that the parts as shown below are take off.

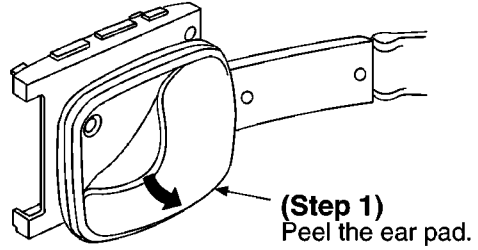


NOTE:
Be careful not to be applied the dust or smudge on the surface rubber.

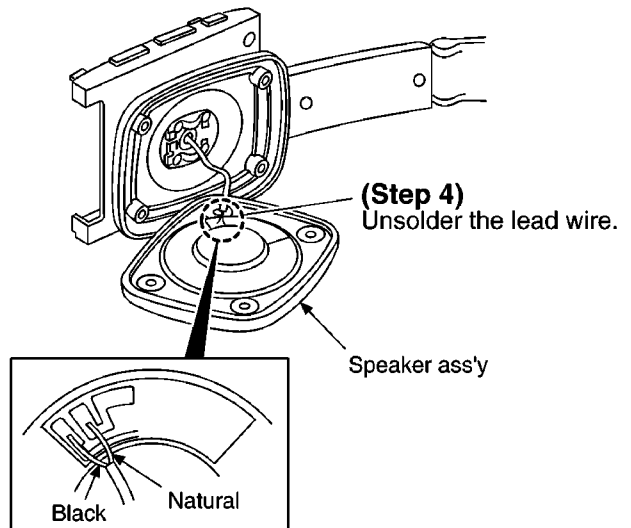
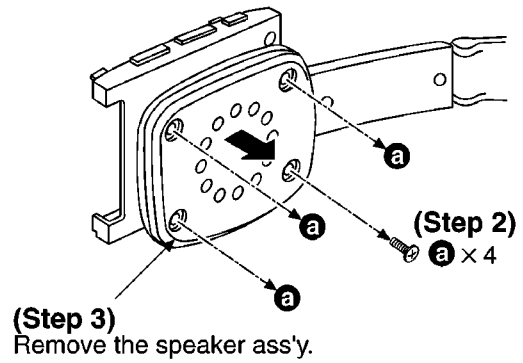
5.3. Replacement for the speaker ass'y and housing

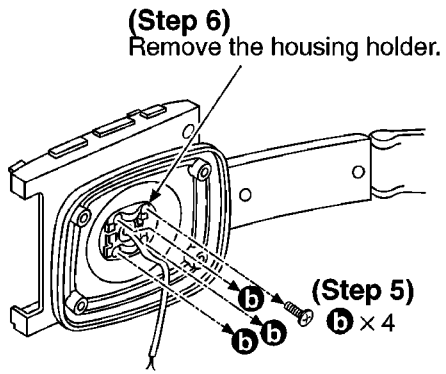
• Follow the (Step 1) - (Step 4) , (Step 11) - (Step 14) of item 5.1.

• The figure below shows the L side parts for disassembly. For R side parts, remove it same as the procedure.

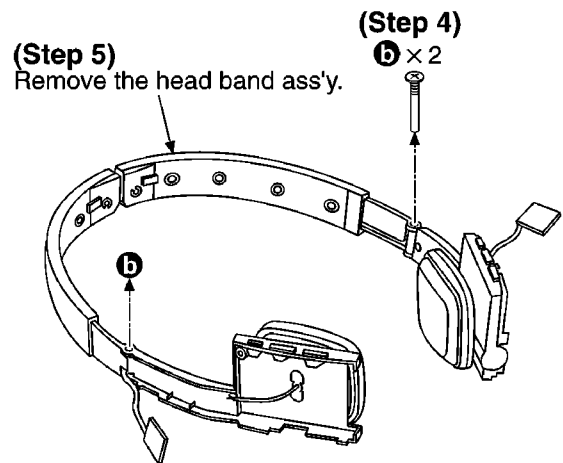
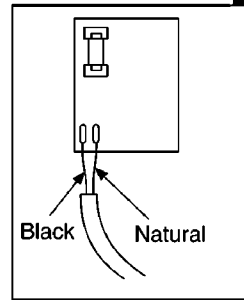
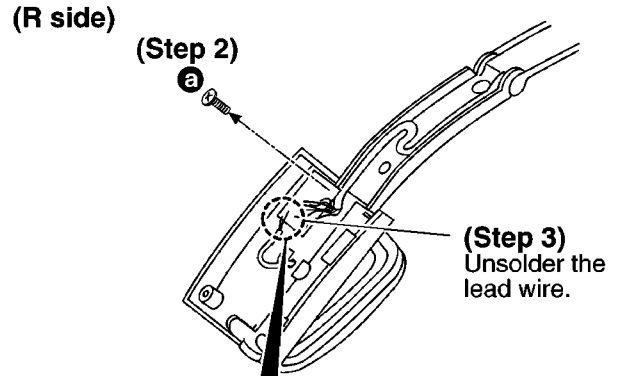
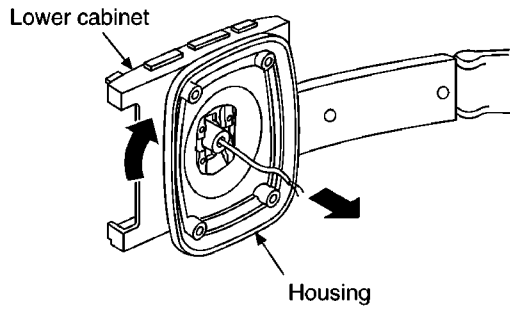


NOTE:
Peel the ear pad gradually to prevent from damage.



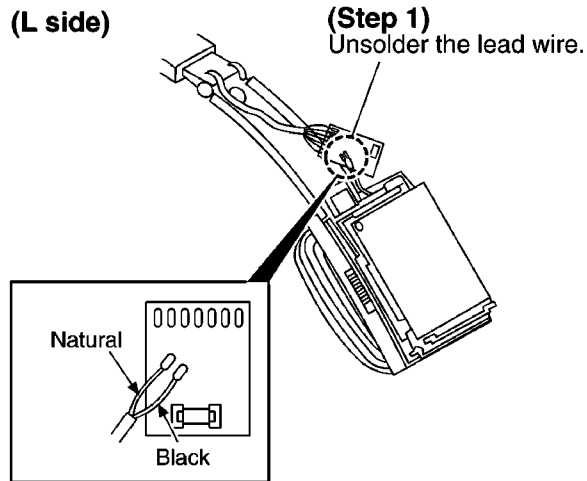


(Step 7)
Rotate the housing at an angle of 90°, and then remove the lower cabinet.

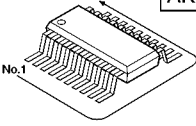
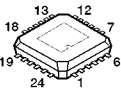
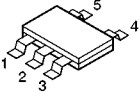
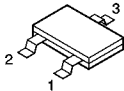
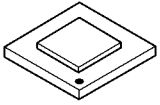
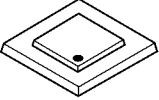
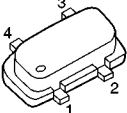
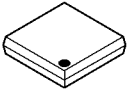
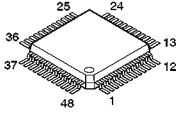
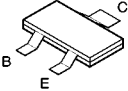
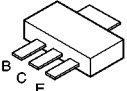
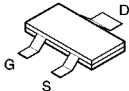
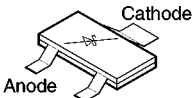
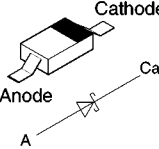


5.4. Replacement for the head band ass'y

• Follow the (Step 1) - (Step 4), (Step 11) - (Step 14) of item 5.1.



6 Type Illustration of ICs, Transistors and Diodes

 <table border="1"> <tr><td>TC7W08FKT85L</td><td>8PIN</td></tr> <tr><td>S29L331AFSTB</td><td>8PIN</td></tr> <tr><td>AK4352VT-E2</td><td>16PIN</td></tr> </table>		TC7W08FKT85L	8PIN	S29L331AFSTB	8PIN	AK4352VT-E2	16PIN	<p>TA2131FL</p> 	<p>TC7SA08FUTEL XC6368B101MR</p> 	<p>XC61CN2202MR</p> 	<table border="1"> <tr><td>MN66817SD</td><td>64PIN</td></tr> </table> 	MN66817SD	64PIN
TC7W08FKT85L	8PIN												
S29L331AFSTB	8PIN												
AK4352VT-E2	16PIN												
MN66817SD	64PIN												
<table border="1"> <tr><td>MN1021617KB</td><td>128PIN</td></tr> <tr><td>MN67736LB1</td><td>120PIN</td></tr> </table> 		MN1021617KB	128PIN	MN67736LB1	120PIN	<p>RSXC16M9R02T</p> 	<table border="1"> <tr><td>CY62136VL70B</td><td>44PIN</td></tr> </table> 		CY62136VL70B	44PIN	<p>E0C623BF2S</p> 	<p>DTA114YETL DTC144EETL DTC144EUT106 2SD1819ASTX</p> 	
MN1021617KB	128PIN												
MN67736LB1	120PIN												
CY62136VL70B	44PIN												
<p>2SD1119RTX</p> 	<p>XP151A13A0MR XP152A12C0MR</p> 	<p>RB491DT146</p> 	<p>RB051L40TE25</p> 										

7 Schematic Diagram Notes




• This schematic diagram may be modified at any time with the development of new technology.

Notes:


- S400:** Hold switch in OFF position
- S401:** Play/stop switch (▶ / ■)
- S402:** Volume up switch (VOLUME +)
- S403:** Volume down switch (VOLUME -)
- S404:** S-XBS switch
- S405:** Skip/search backward switch (◀◀)
- S406:** PLAY LIST switch
- S407:** Skip/search forward switch (▶▶)

• The supply part number is described alone in the replacement parts list.

• Voltage and signal line

-  : Positive voltage line
-  : Audio (analog) signal line
-  : Audio (digital) signal line

• Important safety notice:

Components identified by  mark have special characteristics important for safety.

Furthermore, special parts which have purposes of fire-retardant (resistors), high-quality sound (capacitors), low-noise (resistors), etc. are used.

When replacing any of components, be sure to use only manufacturers specified parts shown in the parts list.

• **Caution!**

IC and LSI are sensitive to static electricity.

Secondary trouble can be prevented by taking care during repair.

Cover the parts boxes made of plastics with aluminum foil.
Ground the soldering iron.

Put a conductive mat on the work table.

Do not touch the legs of IC or LSI with the fingers directly.

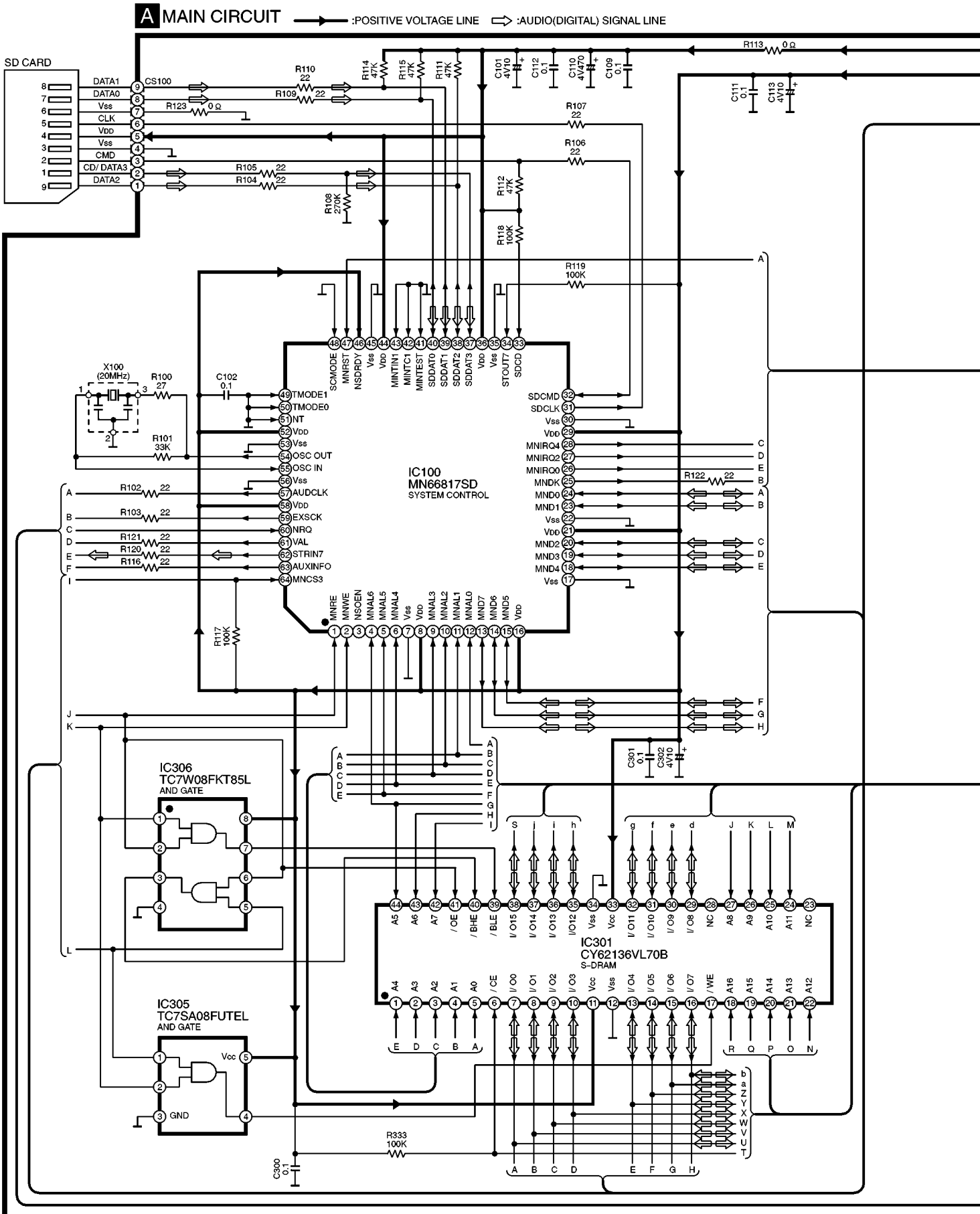
• **Note on repairing**

IC as shown below is not available again with removing from printed circuit board once.

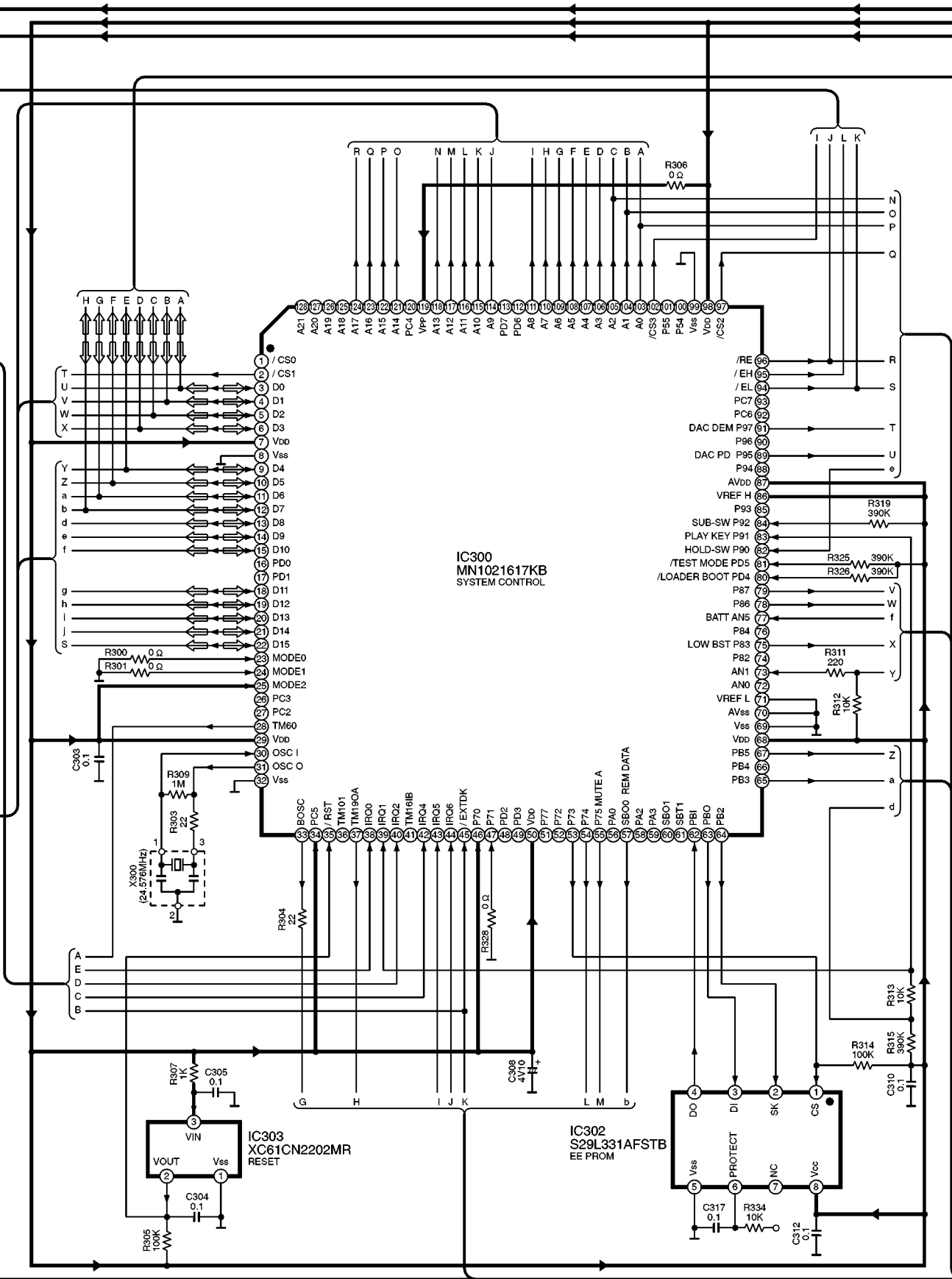
Please be sure to replace it to new one.

- IC100.....MN66817SDR
- IC200.....MN67736LB1R
- IC300.....MN1021617KBR
- IC301.....CY62136VL70B

8 Schematic Diagram

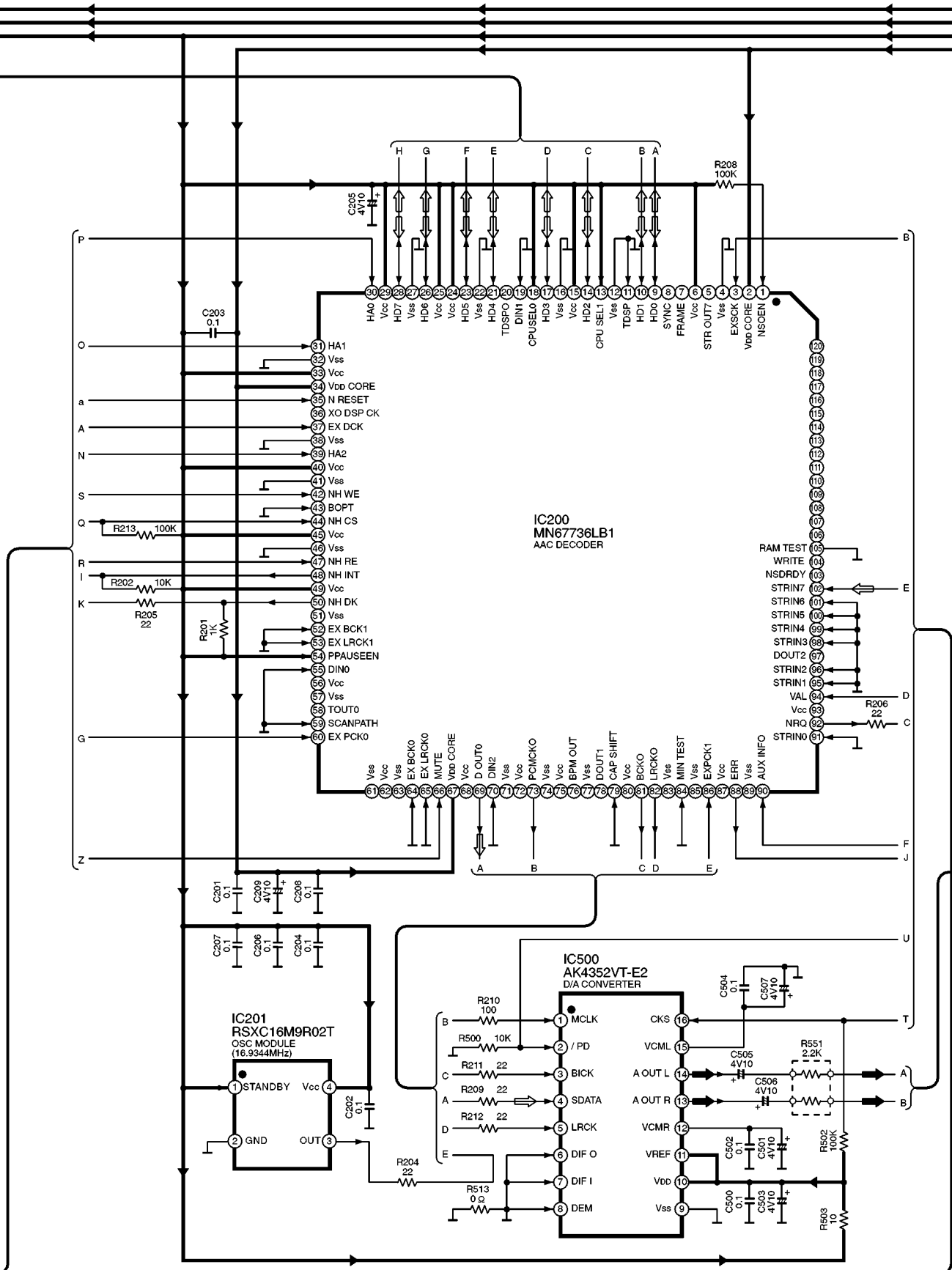


→ : POSITIVE VOLTAGE LINE ⇨ : AUDIO(DIGITAL) SIGNAL LINE

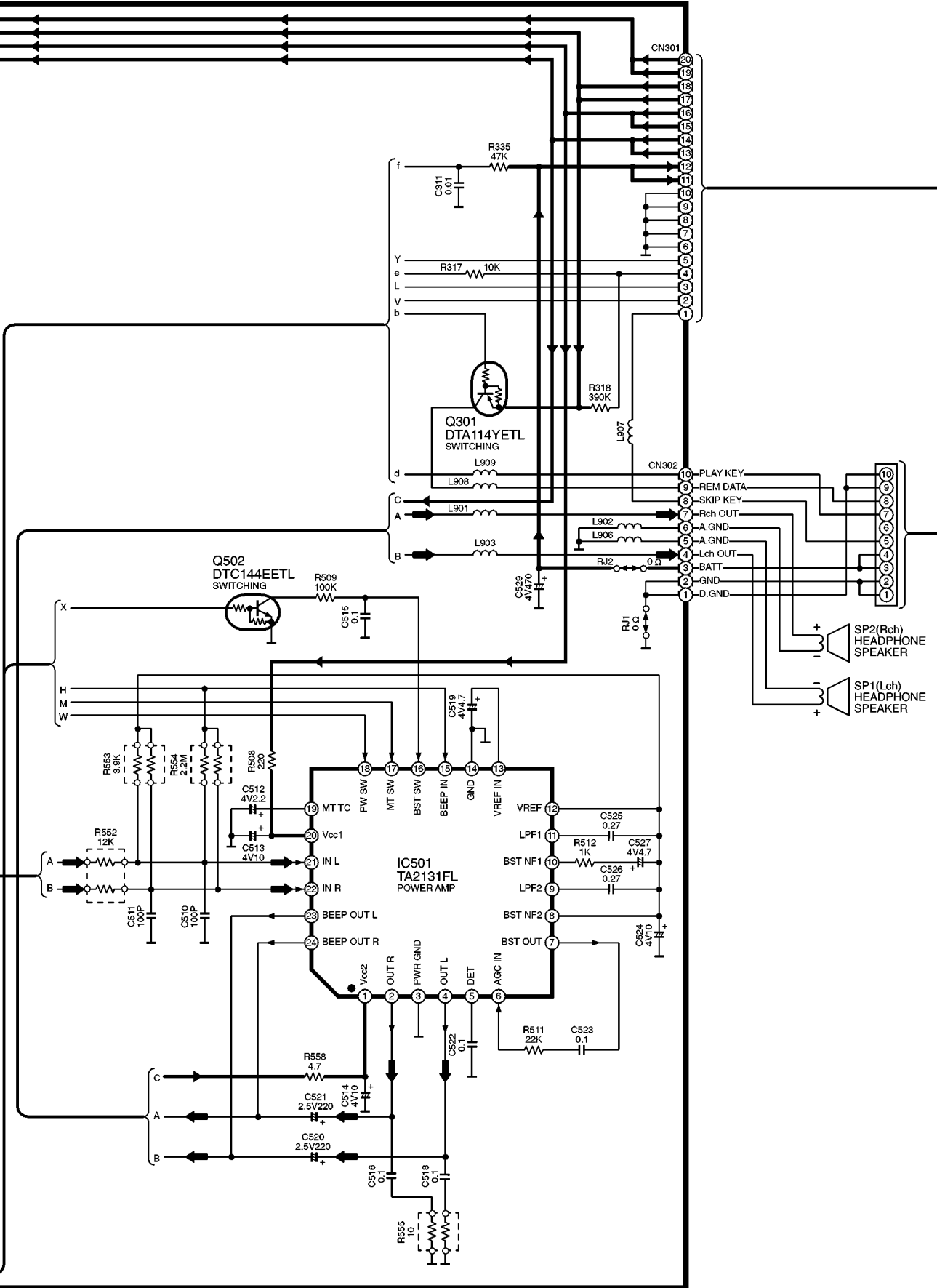


A MAIN CIRCUIT

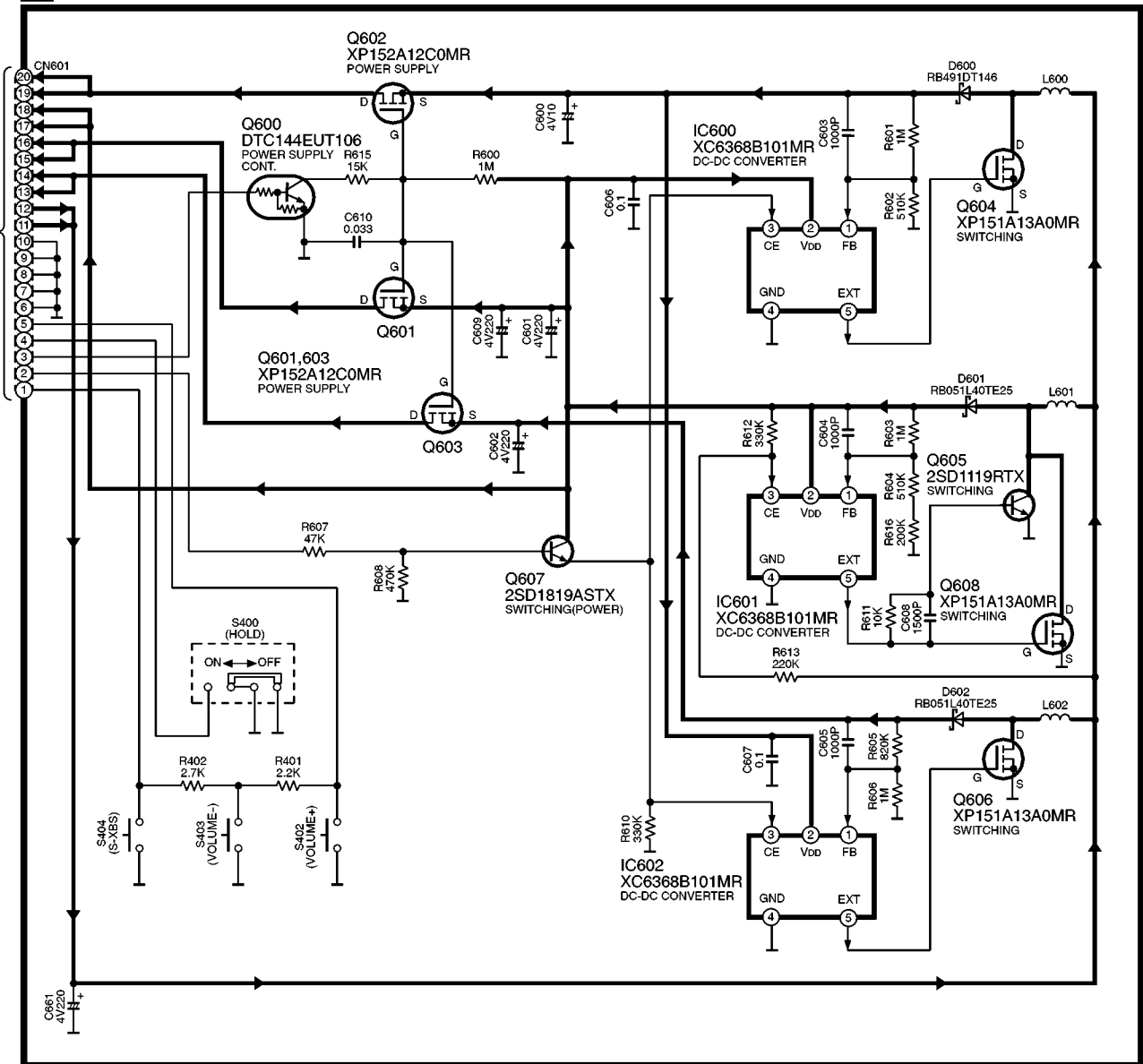
→ : POSITIVE VOLTAGE LINE ⇨ : AUDIO(DIGITAL) SIGNAL LINE ⇩ : AUDIO(ANALOG) SIGNAL LINE



→ : POSITIVE VOLTAGE LINE → : AUDIO(ANALOG) SIGNAL LINE

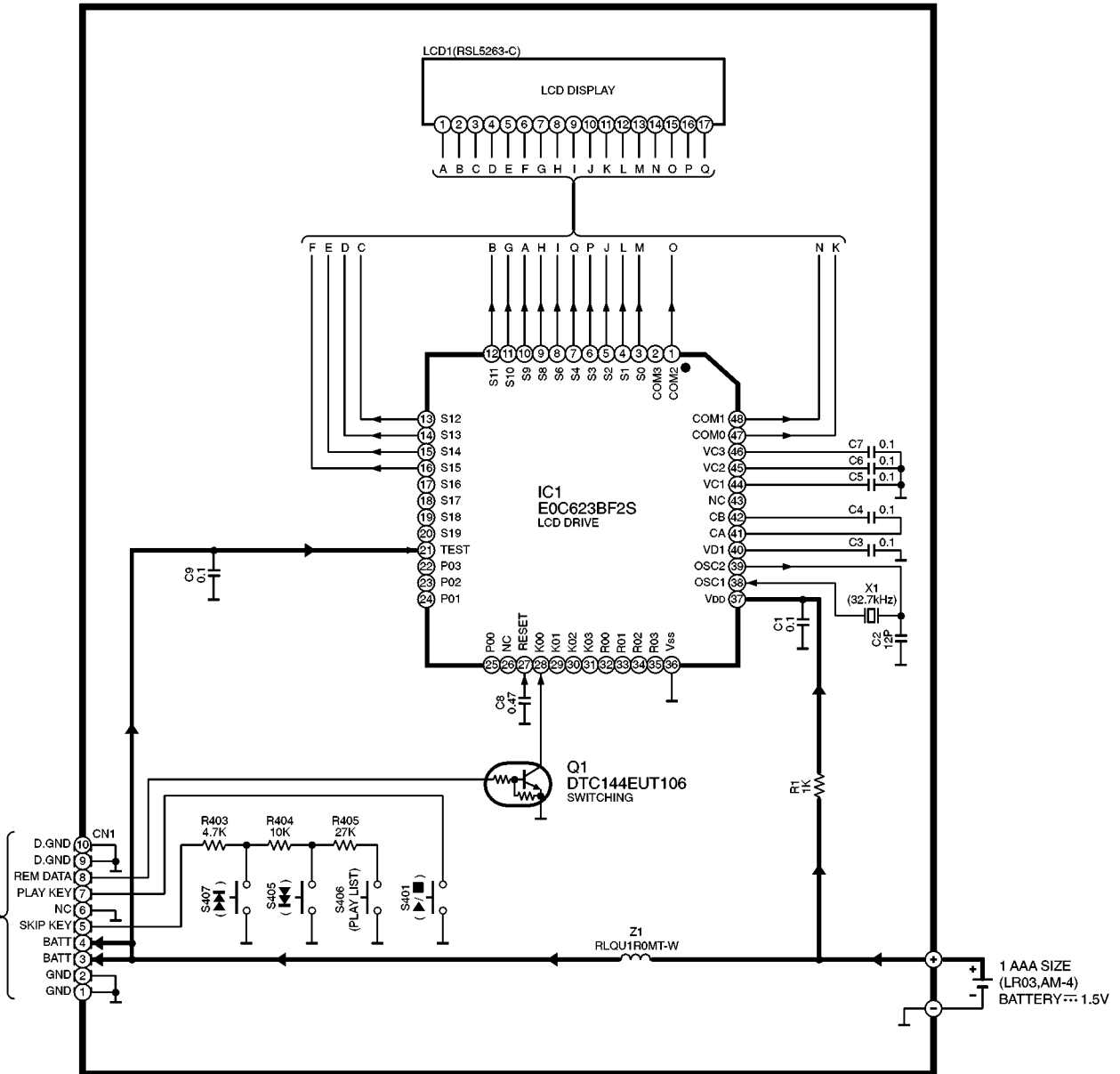


B D/D CIRCUIT → : POSITIVE VOLTAGE LINE

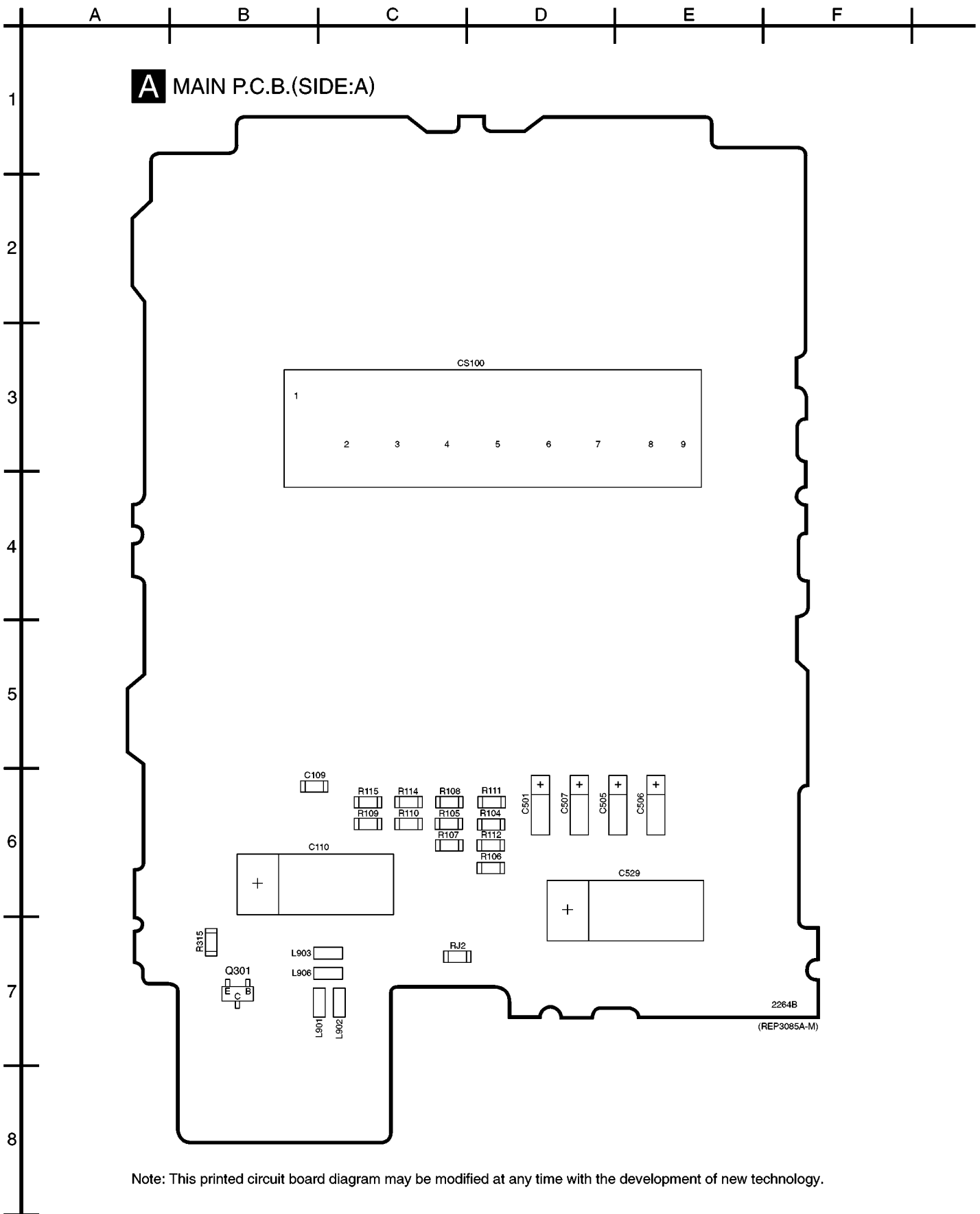


C LCD CIRCUIT

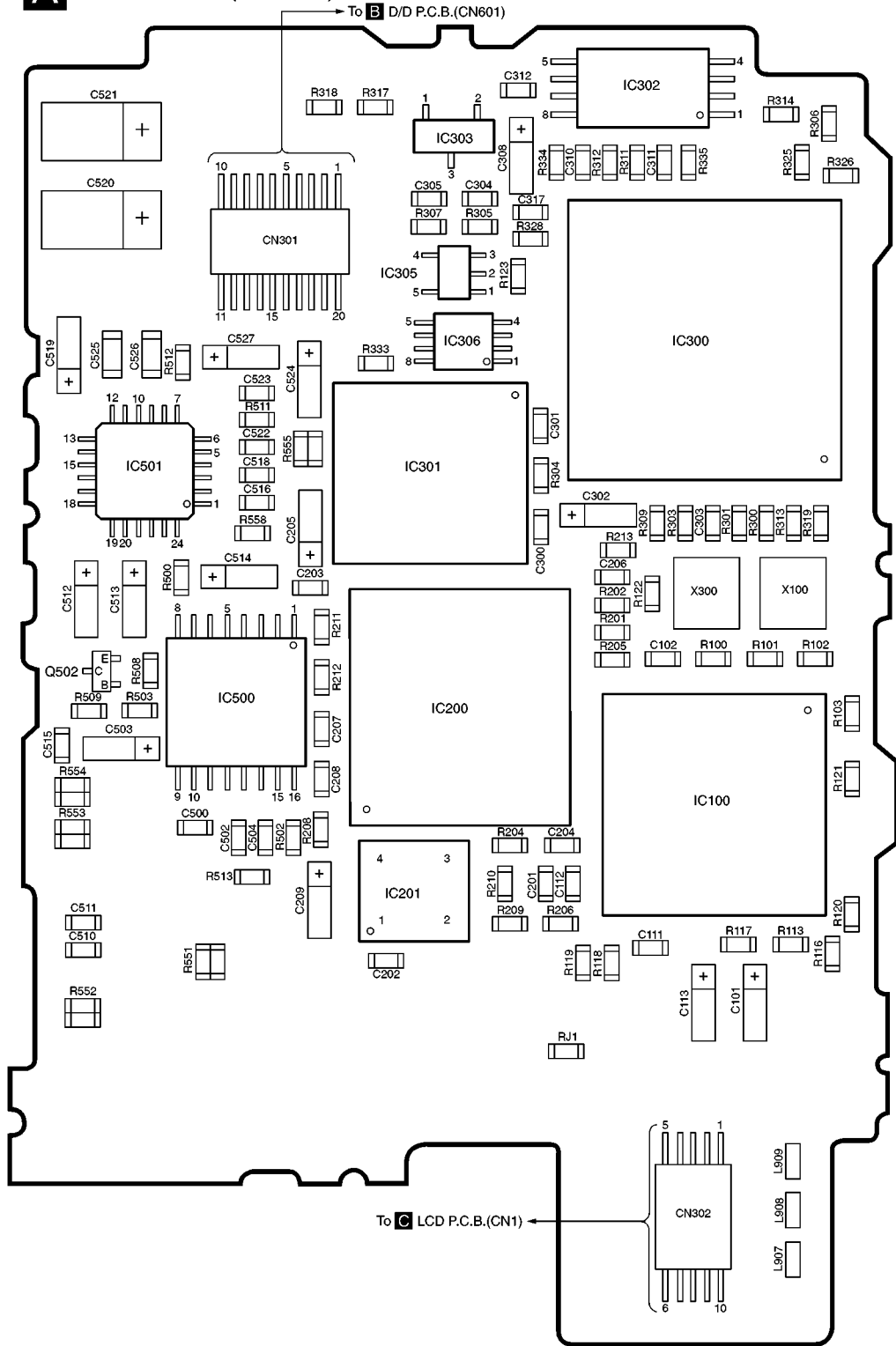
➔ : POSITIVE VOLTAGE LINE



9 Printed Circuit Board and Wiring connection Diagram



A MAIN P.C.B.(SIDE:B)



A B C D E F

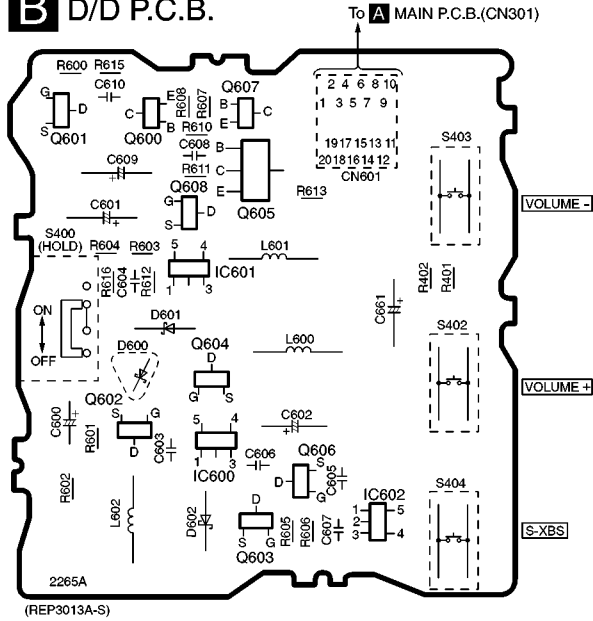
1

2

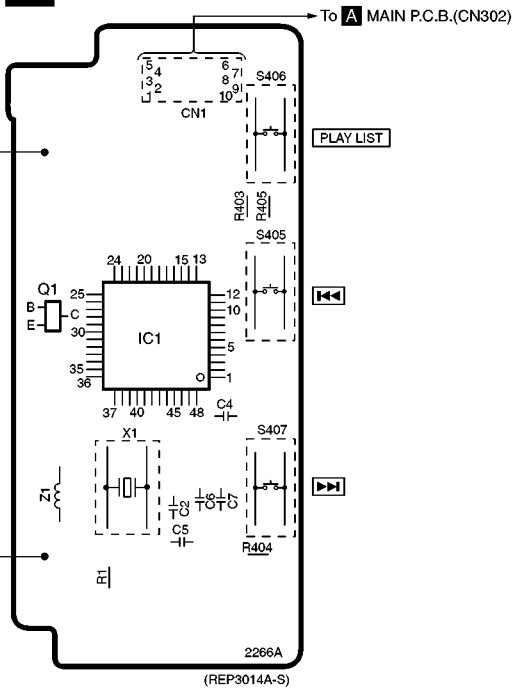
3

4

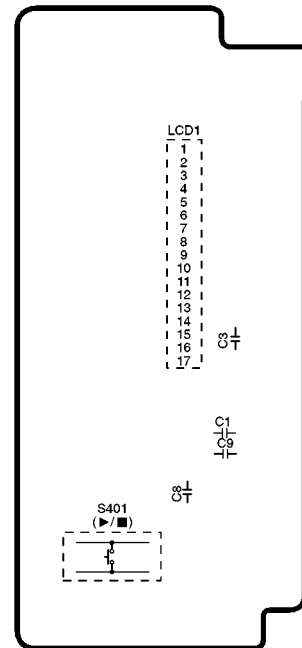
B D/D P.C.B.



C LCD P.C.B.(SIDE:A)



C LCD P.C.B.(SIDE:B)



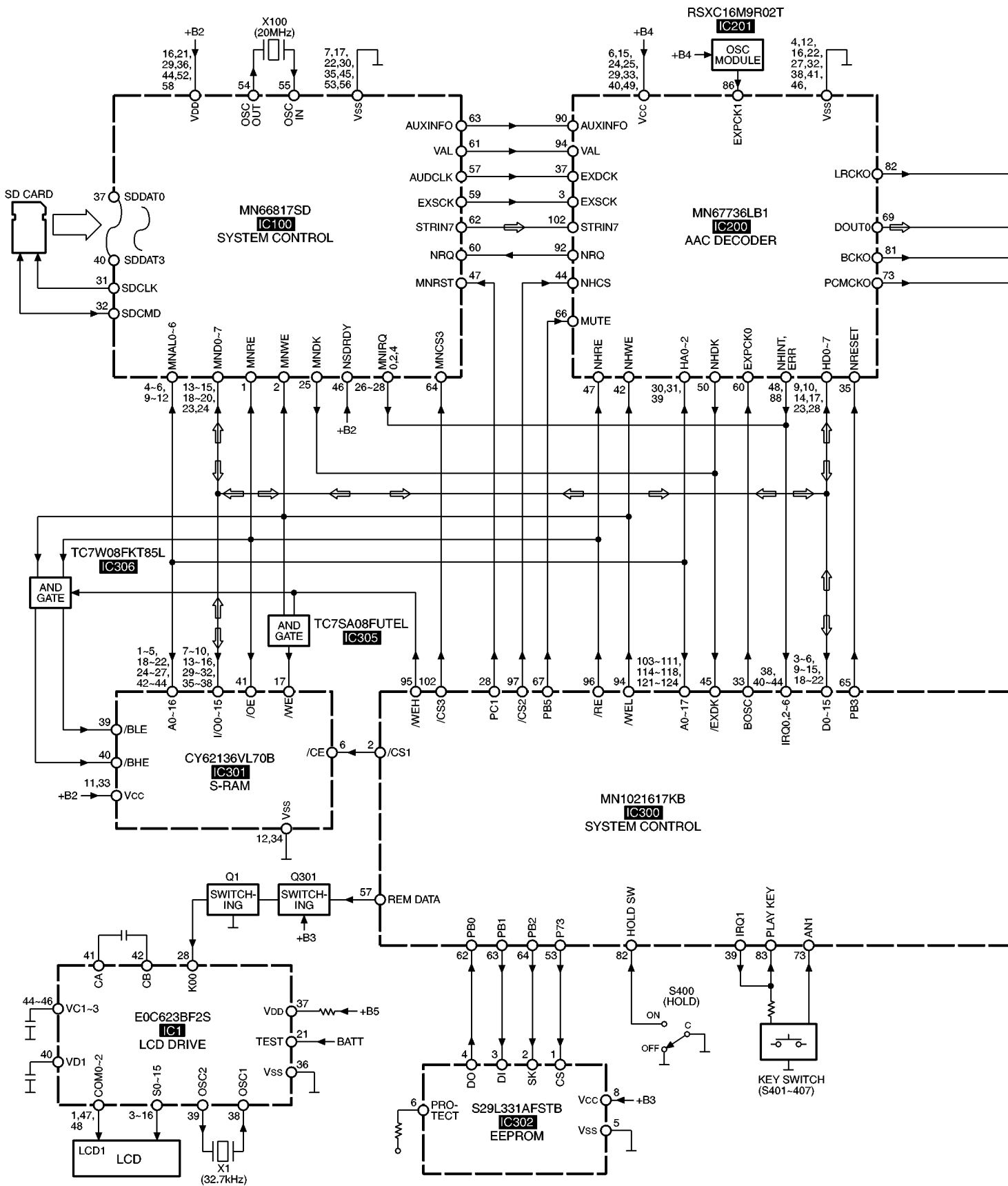
5

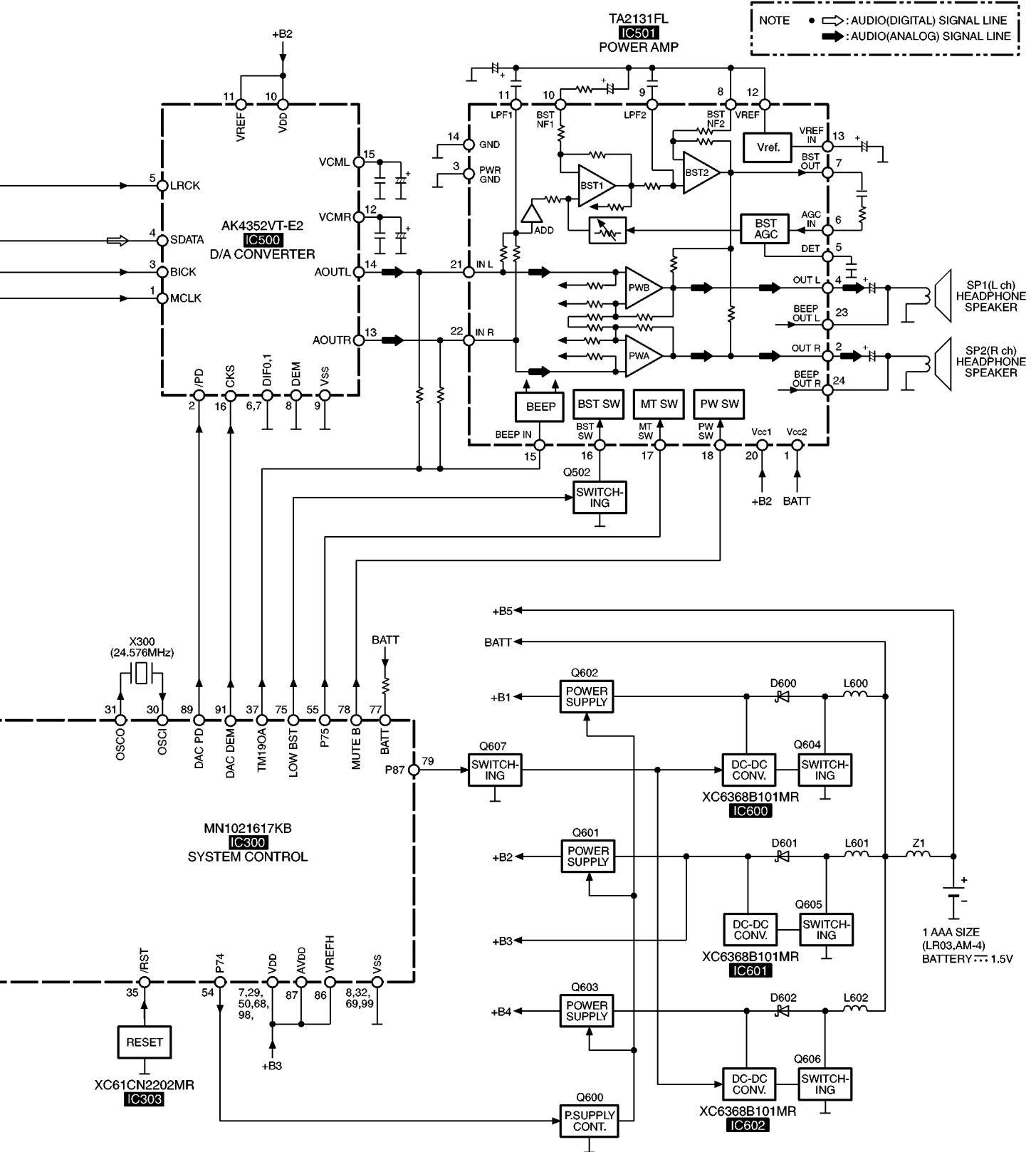
6

7

8

10 Block Diagram





11 Replacement Parts List

Notes:

- Important safety notice:

Components identified by Δ mark have special characteristics important for safety.

Furthermore, special parts which have purposes of fire-retardant (resistors), high-quality sound (capacitors), low-noise (resistors), etc. are used.

When replacing any of components, be sure to use only manufactures specified parts shown in the parts list.

- The <IA> <IB> mark in Remarks indicate language of instruction manual.

<IA>: English, Russian, Spanish, Czech, Chinese and Polish

<IB>: German, Netherlands, Italian, Danish, French and Swedish

- The marking [RTL] indicates that Retention Time is Limited for this item. After the discontinuation of this assembly in production, the item will continue to be available for a specific period of time. The retention period of availability is dependent on the type of assembly, and in accordance with the laws governing part and product retention. After the end of this period, the assembly will no longer be available.

- The marking <SPC> indicates in Remarks is supplied by Service Parts Center.

- All parts are supplied by MESA.
(Except <SPC> marking.)

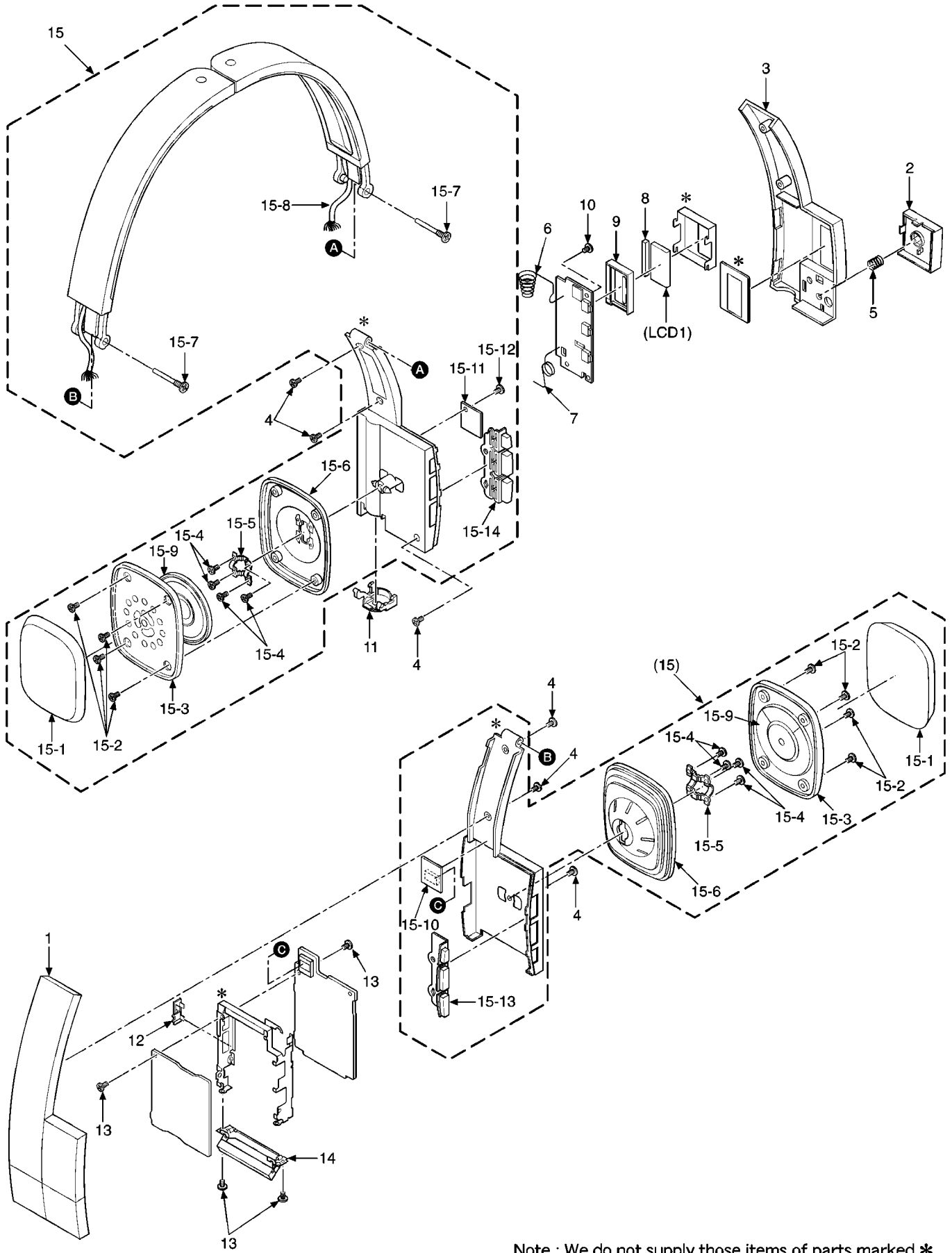
Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
1	RKM0423A-S1	COVER (L)	1	
2	RGU1885-S	BUTTON, PLAY/STOP	1	
3	RFKMVS05P-S	COVER (R)	1	
4	XQN14+BG4FN	SCREW	6	
5	RMB0647	SPRING	1	
6	RJC80021-2	BATT. TERMINAL -	1	<SPC>
7	RJR0214	BATT. TERMINAL +	1	<SPC>
8	RMG0540A-H	RUBBER	1	
9	RMN0598	LCD HOLDER	1	
10	XQN14+BG4FN	SCREW	1	
11	RYF0556-S	BATT. COVER UNIT	1	
12	RGV0261-H	KNOB, HOLD	1	
13	RHQ0083-S	SCREW	4	
14	RYF0555A-S	CARD LID UNIT	1	
15	RYQ0317B-A	HEAD BAND UNIT	1	<SPC>
15-1	RFKNVSD01-AS	EAR PAD	2	
15-2	RFKNVSD01-CS	SCREW	8	
15-3	RFKY0001	CASE COVER	2	
15-4	RFKNVSD01-BS	SCREW	8	
15-5	RFKNVSD01-ES	FIXER	2	
15-6	RFKY0002	CASE	2	
15-7	RHD20051	SCREW	2	
15-8	RFKE0003	CABLE	1	
15-9	RFKAVSD01-S	SPEAKER	2	
15-10	RFKEVSD01-AS	RELAY PCB (L)	1	
15-11	RFKEVSD01-BS	RELAY PCB (R)	1	
15-12	RFKNVSD01-DS	SCREW	1	
15-13	RGU1886-S	BUTTON, VOLUME	1	
15-14	RGU1887-S	BUTTON, PLAYLIST	1	
A1	RFE0072	STRAP HOOK	1	
A2	RQCB0169	SERVICE CENTER LIST	1	

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
A3	RQT5638-E	INSTRUCTION MANUAL	1	<IA><SPC> For Media Manager
A3	RQT5660-E	INSTRUCTION MANUAL	1	<IA><SPC> For Media Manager
A3	RQT5986-D	INSTRUCTION MANUAL	1	<IB><SPC>
A3	RQT5988-D	INSTRUCTION MANUAL	1	<IB><SPC>
C1	ECUVN104KBV	16V 0.1U	1	
C2	ECUV1H120JCV	50V 12P	1	
C3-C7	ECUZNC104ZFB	16V 0.1U	5	F1H1C1040008
C8	ECUVNJ474KBV	6.3V 0.47U	1	F1H0J474A002
C9	ECUZNC104ZFB	16V 0.1U	1	F1H1C1040008
C101	RCST0GZ106RG	4V 10U	1	F3E0G106A002
C102	ECUENA104KBQ	10V 0.1U	1	F1G1A104A014
C109	ECUENA104KBQ	10V 0.1U	1	F1G1A104A014
C110	RCST0GD477RE	4V 470U	1	F3H0G4770003
C111,12	ECUENA104KBQ	10V 0.1U	2	F1G1A104A014
C113	RCST0GZ106RG	4V 10U	1	F3E0G106A002
C201-04	ECUENA104KBQ	10V 0.1U	4	F1G1A104A014
C205	RCST0GZ106RG	4V 10U	1	F3E0G106A002
C206-08	ECUENA104KBQ	10V 0.1U	3	F1G1A104A014
C209	RCST0GZ106RG	4V 10U	1	F3E0G106A002
C300,01	ECUENA104KBQ	10V 0.1U	2	F1G1A104A014
C302	RCST0GZ106RG	4V 10U	1	F3E0G106A002
C303-05	ECUENA104KBQ	10V 0.1U	3	F1G1A104A014
C308	RCST0GZ106RG	4V 10U	1	F3E0G106A002
C310	ECUENA104KBQ	10V 0.1U	1	F1G1A104A014
C311	ECUE1C103KBQ	16V 0.01U	1	
C312	ECUENA104KBQ	10V 0.1U	1	F1G1A104A014
C317	ECUENA104KBQ	10V 0.1U	1	F1G1A104A014
C500	ECUENA104KBQ	10V 0.1U	1	F1G1A104A014
C501	RCST0GZ106RG	4V 10U	1	F3E0G106A002
C502	ECUENA104KBQ	10V 0.1U	1	F1G1A104A014
C503	RCST0GZ106RG	4V 10U	1	F3E0G106A002
C504	ECUENA104KBQ	10V 0.1U	1	F1G1A104A014
C505-07	RCST0GZ106RG	4V 10U	3	F3E0G106A002
C510,11	ECUE1H101KBQ	50V 100P	2	
C512	RCST0GZ225RG	4V 2.2U	1	F3E0G225A002
C513,14	RCST0GZ106RG	4V 10U	2	F3E0G106A002
C515,16	ECUENA104KBQ	10V 0.1U	2	F1G1A104A014
C518	ECUENA104KBQ	10V 0.1U	1	F1G1A104A014
C519	RCST0GZ475RG	4V 4.7U	1	F3E0G475A002
C520,21	RCST0EX227RE	2.5V 220U	2	F3G0E2270001
C522,23	ECUENA104KBQ	10V 0.1U	2	F1G1A104A014
C524	RCST0GZ106RG	4V 10U	1	F3E0G106A002
C525,26	ECUVNJ274KBV	6.3V 0.27U	2	F1H0J2740001
C527	RCST0GZ475RG	4V 4.7U	1	F3E0G475A002
C529	RCST0GD477RE	4V 470U	1	F3H0G4770003
C600	RCST0GY106RG	4V 10U	1	F3F0G1060003
C601,02	RCST0GC227RE	4V 220U	2	F3H0G227A005
C603-05	ECUV1H102KBV	50V 1000P	3	
C606,07	ECUVN104KBV	16V 0.1U	2	
C608	ECUV1H152KBV	50V 1500P	1	F1H1H152A013
C609	RCST0GC227RE	4V 220U	1	F3H0G227A005
C610	ECUVN333KBV	16V 0.033U	1	F1H1C333A071
C661	RCST0GC227RE	4V 220U	1	F3H0G227A005
CN1	RJU031W10AT	CONNECTOR (10P)	1	
CN301	RJT032W20AT	CONNECTOR (20P)	1	
CN302	RJU031W10AT	CONNECTOR (10P)	1	
CN601	RJU032W20AT	CONNECTOR (20P)	1	
CS100	RJS2A8309	CONNECTOR (SD CARD)	1	K1NA09D00001
D600	RB491DT146	DIODE	1	B0JCMC000004
D601,02	RB051L40TE25	DIODE	2	B0JCP0000016
IC1	E0C623BF2S	IC	1	<SPC>
IC100	MN66817SDR	IC	1	<SPC>

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
IC200	MN67736LB1R	IC	1	<SPC>
IC201	RSXC16M9R02T	IC	1	H1A1695B0003 <SPC>
IC300	MN1021617KBR	IC	1	<SPC>
IC301	CY62136VL70B	IC	1	<SPC>
IC302	RFKFSVSD75	IC	1	<SPC>
IC303	KC61CN2202MR	IC	1	<SPC>
IC305	TC7SA08FUTEL	IC	1	C0JBAA000246 <SPC>
IC306	TC7W08FKT85L	IC	1	C0JBAA000245 <SPC>
IC500	AK4352VT-E2	IC	1	C0FBHH000027 <SPC>
IC501	TA2131FL	IC	1	
IC600-02	XC6368B101MR	IC	3	C0DBAZZ00032
L600	RL09U028T-T	COIL	1	G1C470MA0011
L601	RLZ0038T-T	COIL	1	G1C270MA0011
L602	RL09U028T-T	COIL	1	G1C470MA0011
L901-03	J0JAC0000011	COIL	3	
L906-09	J0JAC0000011	COIL	4	
LCD1	RSL5263-C	LCD	1	L5AABBB00001 <SPC>
P1	RPF0305	PROTECTION COVER	1	
P2	RPK1514	GIFT BOX	1	
P3	RPN1319	PAD 1	1	
P4	RPN1387	PAD 2	1	
P5	RPQ1073	HARD CASE	1	
P6	RPF0046	PROTECTION BAG (F.B.)	1	
P7	RPQ1115	PAD 3	1	
P8	RPF0085	BAG	1	
PCB1	REP3013A-S	SUB1 PCB	1	[RTL] <SPC>
PCB2	REP3085A-M	MAIN PCB	1	[RTL] <SPC>
PCB3	REP3014A-S	SUB2 PCB	1	[RTL] <SPC>
Q1	DTC144EUT106	TRANSISTOR	1	B1GBCFNN0013
Q301	DTA114YETL	TRANSISTOR	1	B1GDCCFJN0001
Q502	DTC144EETL	TRANSISTOR	1	B1GBCFNN0001
Q600	DTC144EUT106	TRANSISTOR	1	B1GBCFNN0013
Q601-03	XP152A12COMR	FET	3	B1DHAC000002
Q604	XP151A13A0MR	TRANSISTOR	1	B1DFBC000003
Q605	2SD1119RTX	TRANSISTOR	1	2SD11190RL
Q606	XP151A13A0MR	TRANSISTOR	1	B1DFBC000003
Q607	2SD1819ASTX	TRANSISTOR	1	2SD1819ASL
Q608	XP151A13A0MR	TRANSISTOR	1	B1DFBC000003
R1	ERJ3GEYJ102V	1/16W 1K	1	ERJ3GEYJ102Z
R100	ERJ2GEJ270X	1/16W 27	1	ERJ2RMJ270X
R101	ERJ2GEJ333X	1/16W 33K	1	ERJ2RMJ333X
R102-07	ERJ2GEJ220X	1/16W 22	6	ERJ2RMJ220X
R108	ERJ2GEJ274X	1/16W 270K	1	DOGA274JA001
R109,10	ERJ2GEJ220X	1/16W 22	2	ERJ2RMJ220X
R111,12	ERJ2GEJ473X	1/16W 47K	2	ERJ2RMJ473X
R113	ERJ2GE0R00X	CHIP JUMPER	1	
R114,15	ERJ2GEJ473X	1/16W 47K	2	ERJ2RMJ473X
R116	ERJ2GEJ220X	1/16W 22	1	ERJ2RMJ220X
R117-19	ERJ2GEJ104X	1/16W 100K	3	ERJ2RMJ104X
R120-22	ERJ2GEJ220X	1/16W 22	3	ERJ2RMJ220X
R123	ERJ2GE0R00X	CHIP JUMPER	1	
R201	ERJ2GEJ102X	1/16W 1K	1	ERJ2RMJ102X
R202	ERJ2GEJ103X	1/16W 10K	1	ERJ2RMJ103X
R204-06	ERJ2GEJ220X	1/16W 22	3	ERJ2RMJ220X
R208	ERJ2GEJ104X	1/16W 100K	1	ERJ2RMJ104X
R209	ERJ2GEJ220X	1/16W 22	1	ERJ2RMJ220X
R210	ERJ2GEJ101X	1/16W 100	1	ERJ2RMJ101X
R211,12	ERJ2GEJ220X	1/16W 22	2	ERJ2RMJ220X
R213	ERJ2GEJ104X	1/16W 100K	1	ERJ2RMJ104X
R300,01	ERJ2GE0R00X	CHIP JUMPER	2	
R303,04	ERJ2GEJ220X	1/16W 22	2	ERJ2RMJ220X
R305	ERJ2GEJ104X	1/16W 100K	1	ERJ2RMJ104X

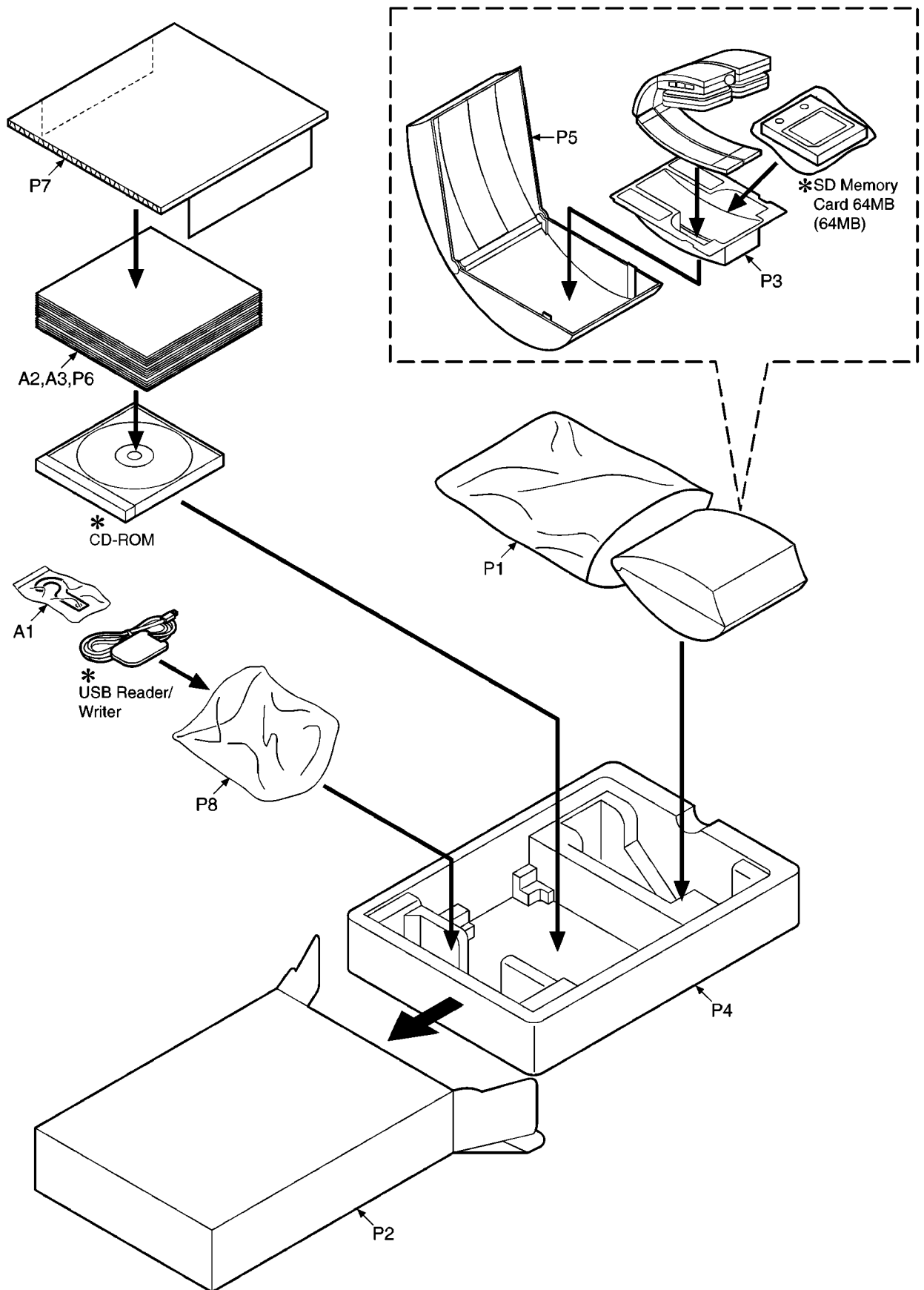
Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
R306	ERJ2GE0R00X	CHIP JUMPER	1	
R307	ERJ2GEJ102X	1/16W 1K	1	ERJ2RMJ102X
R309	ERJ2GEJ105X	1/16W 1M	1	DOGA105JA001
R311	ERJ2GEJ221X	1/16W 220	1	ERJ2RMJ221X
R312,13	ERJ2GEJ103X	1/16W 10K	2	ERJ2RMJ103X
R314	ERJ2GEJ104X	1/16W 100K	1	ERJ2RMJ104X
R315	ERJ2GEJ394X	1/16W 390K	1	ERJ2RMJ394X
R317	ERJ2GEJ103X	1/16W 10K	1	ERJ2RMJ103X
R318,19	ERJ2GEJ394X	1/16W 390K	2	ERJ2RMJ394X
R325,26	ERJ2GEJ394X	1/16W 390K	2	ERJ2RMJ394X
R328	ERJ2GE0R00X	CHIP JUMPER	1	
R333	ERJ2GEJ104X	1/16W 100K	1	ERJ2RMJ104X
R334	ERJ2GEJ103X	1/16W 10K	1	ERJ2RMJ103X
R335	ERJ2GEJ473X	1/16W 47K	1	ERJ2RMJ473X
R401	ERJ3GEYJ222V	1/16W 2.2K	1	
R402	ERJ3GEYJ272V	1/16W 2.7K	1	
R403	ERJ3GEYJ472V	1/16W 4.7K	1	DOGB472JA002
R404	ERJ3GEYJ103Z	1/16W 10K	1	
R405	ERJ3GEYJ273V	1/16W 27K	1	DOGB273JA002
R500	ERJ2GEJ103X	1/16W 10K	1	ERJ2RMJ103X
R502	ERJ2GEJ104X	1/16W 100K	1	ERJ2RMJ104X
R503	ERJ2GEJ100X	1/16W 10	1	ERJ2RMJ100X
R508	ERJ2GEJ221X	1/16W 220	1	ERJ2RMJ221X
R509	ERJ2GEJ104X	1/16W 100K	1	ERJ2RMJ104X
R511	ERJ2GEJ223X	1/16W 22K	1	ERJ2RMJ223X
R512	ERJ2GEJ102X	1/16W 1K	1	ERJ2RMJ102X
R513	ERJ2GE0R00X	CHIP JUMPER	1	
R551	EXB24V222JX	1/16W 2.2K	1	
R552	EXB24V123JX	1/16W 12K	1	
R553	EXB24V392JX	1/16W 3.9K	1	
R554	EXB24V225JX	1/16W 2.2M	1	
R555	EXB24V100JX	1/16W 10	1	
R558	ERJ3GEYJ4R7V	1/16W 4.7	1	
R600	ERJ3GEYJ105V	1/16W 1M	1	
R601	ERJ3RED105V	1/16W 1M	1	
R602	ERJ3RED514V	1/16W 510K	1	
R603	ERJ3RED105V	1/16W 1M	1	
R604	ERJ3RED514V	1/16W 510K	1	
R605	ERJ3RED824V	1/16W 820K	1	
R606	ERJ3RED105V	1/16W 1M	1	
R607	ERJ3GEYJ473V	1/16W 47K	1	DOGB473JA002
R608	ERJ3GEYJ474V	1/16W 470K	1	
R610	ERJ3GEYJ334V	1/16W 330K	1	
R611	ERJ3GEYJ103Z	1/16W 10K	1	
R612	ERJ3GEYJ334V	1/16W 330K	1	
R613	ERJ3GEYJ224V	1/16W 220K	1	DOGB224JA002
R615	ERJ3GEYJ153V	1/16W 15K	1	
R616	ERJ3GEYD204V	1/16W 200K	1	
RJ1, J2	ERJ3GEY0R00V	CHIP JUMPER	2	
S400	RSS2A010-1A	SW, HOLD	1	K0D112B00071
S401	EVQPLMA15	SW, PLAY/SKIP	1	
S402-07	EVQPUL02K	SW, PUSH	6	
X1	RSXC32K7L04T	OSCILLATOR	1	H0J327200048
X100	H2D200000001	OSCILLATOR	1	
X300	RSXY24M5M01T	OSCILLATOR	1	
Z1	RLQUIR0MT-W	COIL	1	G1C1ROM00004

12 Cabinet Parts Location



Note : We do not supply those items of parts marked *.

13 Packaging



Note : We do not supply those items of parts marked * .